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STATISTICS OF FOREIGN AND DOMESTIC WAGES, PRICES, FREIGHT AND TARIFF RATES. AND OF DOMESTIC EXPORTS

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INTRODUCTION

The following compilation presents statistical information obtained, during the consideration by the Senate of the tariff act of 1930, by Senators William H. King and Alben W. Barkley, members of the Senate Committee on Finance.

Chapter I compares wages and labor productivity of the United States, Great Britain, and Germany.

Chapter II compares prices in the same countries.

Chapter III enumerates some of the difficulties, aside from labor cost, which are met by United States manufacturers of certain articles. Such difficulties include natural disadvantages, adverse freight differentials, and high proportions of hand labor.

Chapter IV lists a number of United States manufactures whose exports exceed imports.

Chapter V shows the tariff rates charged by a number of foreign countries on their principal imports. Because of the complexity of tariff rates as given in the laws, the foreign rates have been reduced to an equivalent ad valorem basis. They may thus be easily compared.

The purpose of this compilation is to present a general survey of the subjects mentioned above. The information given with respect to any specific commodity is, of course, insufficient on which to base conclusions as to the tariff treatment it should receive. The tariff treatment it should receive. The tariff treatment of nearly every commodity embraces many individual problems which can not be discussed in a general survey.

STATISTICS OF FOREIGN AND DOMESTIC WAGES, PRICES, FREIGHT AND TARIFF RATES, AND OF DOMESTIC EXPORTS

CHAPTER I

PRODUCTIVITY AND WAGES OF UNITED STATES AND FOREIGN WORKERS

One of the most common topics of discussion in hearings and debates upon the tariff is the low rate of wages in foreign countries compared with the high wages in the United States. A great many statistics are available showing comparative domestic and foreign rates of wages, but for purposes of guidance in tariff legislation they usually suffer from two prominent defects.

In the first place a comparison of the wages of the many different kinds of operatives in any industry is of little value unless the relative importance of each operative is known. For example, a foreman in an American shop may receive double the wage received by a foreman in a German shop, but if there are 20 workers under each foreman, the higher wage of the American may not make much difference in the total cost. Or an American weaver may receive double the pay of an English weaver, but the American weaver, having several low-wage helpers, may confine his work to highly technical operations while the English weaver devotes a large part of his time to various chores incidental to the operation of the machine. Thus, while all the wage rates in the foreign and domestic establishment might be the same, the different organization and numbers of the different operatives may be such that the total wage paid would be quite different.

There are also questions of bonuses, and additional rates for overtime which are not usually included in a comparison of wage rates.

For the foregoing reasons, a comparison of wage rates in a foreign and domestic industry gives little information with respect to actual differences in total wage payments.

The second defect inherent in a comparison of foreign and domestic wages alone is that such a comparison does not take into consideration the productivity of the wage earner. The organization of productive operations, the mechanical equipment, and power employed are as important factors in modern production as labor itself. The highly-paid workman operating an efficient machine may produce at a lower labor cost than the low-paid worker operating an old inefficient machine.

It follows therefore that a comparison of foreign and domestic wage rates is an inadequate criterion for the establishment of tariff rates.

A true measure of the significance of the differences in foreign and domestic wages can be ascertained only by a detailed investigation

of costs of production. Cost of production studies, however, are expensive, require much time, and frequently are out of the question because of the refusal of foreign producers to show their records. The fact that many articles are manufactured jointly with other articles, and the problem of obtaining the same grades of foreign and domestic goods, add to the difficulties of the cost comparisons.

Since, for the above reasons, detailed foreign and domestic cost comparisons can not be expected in the near future to cover more than a small fraction of the competitive field, and since an uncritical comparison only of the rates of foreign and domestic wages is misleading, it has seemed desirable to make as careful a study as available statistics permit of actual wages paid in different countries in their relation to the productivity of the wage earner. The published statistics that can be used for this purpose may be divided into two groups: (1) Certain comparative studies that have been made of national income, of the productivity of agriculture, and of special industries, such as coal; (2) industrial census statistics which give for certain industries among other things the average number of workers, the total wages paid, the quantity and/or value of output. Russia, Great Britain, and Germany are the only foreign countries whose industrial census statistics are at all complete. Russian statistics of wages can not be used because of the uncertain value of the ruble. Germany and Great Britain, however, publish statistics which can be used for the purposes of this study.

This chapter, therefore, undertakes to examine the available information on the question of foreign and domestic wages and labor productivity that may be found in (1) general data and special studies and (2) industrial census statistics.

1. *General data and special studies.*—Workers can not, in the long run, receive as wage earners more than is produced. If the national production or income is small, it necessarily follows that wages will be small. A number of studies have been made of national income. In all cases the figures obtained are estimates and subject to considerable error. All estimates agree, however, in placing the total per capita income of European countries much lower than that of the United States.

The following statistics of national wealth and income have been taken from a table compiled by Redmond & Co., investment bankers of New York City

Per capita wealth and income of certain countries, 1927 [1]

Countries	Per capita wealth	Per capita income	Countries	Per capita wealth	Per capita income
United States	$2,942	$775	Norway	$904	$258
Austria	522	155	Poland	466	66
Czechoslovakia	680	124	Spain	1,849	300
France	1,426	175	Sweden	804	213
Germany	1,209	210	United Kingdom	2,690	451
Italy	588	123			

[1] Published in the Congressional Record, Jan. 17, 1929, p. 1837.

Assuming that the relative shares of the national income received by capital and labor are about the same in one country as in another country, it is evident that the basic reason for the low average wages

paid in European countries is the low national production, the national income and national production being the same thing.[1]

Statistics appearing later in this report show that the average English wage in manufacturing industry is 40 per cent of the average United States wage. The above table shows that the per capita income of the United Kingdom is 58 per cent of the income in the United States. The German wage in manufactures is about 33 per cent of the United States wage and the German per capita production (per capita income) is 27 per cent of the United States per capita production (per capita income).

These facts show that the low wages of the European workmen are mainly caused by their low productivity. Industry can not pay them more than they produce. In the United States, on the other hand, per capita productivity (income) is high and therefore high wages can be paid.

A certain amount of general information relative to productivity and wages may be obtained by a comparison of agricultural production in the United States and Europe. Agriculture is a basic industry in most countries. Its productivity and wage rates have a marked influence upon wages paid in other industries. Indeed, throughout much of the history of the United States, it was the alternative opportunity open to wage earners to become independent farmers that compelled manufacturers to pay high wages. The wage rate at which the laborer was willing to work was often determined by what he could produce if he took up a farm for himself.

The following table shows the percentage of the population engaged in agriculture, forestry, and fishing in the United States and certain European countries.

Percentage of working population engaged in agriculture, forestry, and fishing[1]

Ccuntry	Year	Per cent	Country	Year	Per cent
Great Britain	1921	7.8	France	1921	41.5
Belgium	1910	16.6	Sweden	1910	46.2
Netherlands	1920	23.6	Ireland	1911	43.0
Switzerland	1920	26.0	Italy	1911	55.5
United States	1920	26.3	Austria	1910	56.9
Germany	1907	35.2	Hungary	1910	64.1
Denmark	1921	35.6	Spain	1910	56.2
Norway	1920	36.8	Russia	1897	58.3
Czechoslovakia	1921	40.3	Finland	1920	70.4

[1] League of Nations, Agriculture and the International Economic Crisis, Geneva, 1927, p. 11.

With an appreciation of the importance that agriculture has upon the wage rate of a country it is interesting to make a comparison of the productivity of the agricultural worker in the United States and Europe. No exact figures may be obtained on this subject, but in 1923 the United States Department of Agriculture made an estimate covering the seven crops: Wheat, rye, barley, oats, potatoes, tobacco, and sugar beets. In these commodities the average production in the United States per person directly employed was found to be 259 per cent of the average production per person directly employed in the United Kingdom, Germany, Belgium, and France combined.[2]

Excluding income from foreign investments.
[2] Agricultural Yearbook, 1923, p. 477.

It is stated at the Department of Agriculture that the superiority of agricultural productivity of the United States has greatly increased since the foregoing estimate was made.

The following table compares farm wages in the United States and certain European countries in 1924 and 1925. It shows that the wages in the United States bore about the same quantitative ratio to wages in European countries as labor productivity in the United States bore to that in Europe.

Average wages of farm laborers in the United States and foreign countries [1]

Country	Date	Wage per day	Country	Date	Wage per day
United States [2]	1925	$2.46	Denmark	1924–25	$1.10
France	1924	1.05	Norway	1924–25	1.28
Great Britain	Dec. 31, 1925	[3] 1.27	Germany	December, 1925	[4] .70

[1] U. S. Department of Labor, Monthly Labor Review, August, 1927, p. 116.
[2] Ibid., December, 1928, p. 189.
[3] $7.64 per week.
[4] 7 cents per hour.

In 1927–28 a very comprehensive investigation was made by the International Labor Office of output and earnings in the coal industry. The following table shows for the principal producing countries the average annual output per worker and the average annual earnings per worker.

Output and earnings per worker in coal mines in specified countries, 1925 [1]

Country	Average annual output per worker		Average annual earnings per worker [2]	
	Amount	Per cent of United States	Amount	Per cent of United States
	Metric tons			
United States (1926)	[3] 876	----------	$1,382	----------
Germany:				
Ruhr	296	33.79	601	43.49
Saxony	180	20.55	546	39.51
Belgium	142	16.21	420	30.39
France	172	19.63	427	30.90
Great Britain	290	33.11	866	62.66
Poland	296	33.79	365	26.41
Czechoslovakia	253	28.88	449	32.49

[1] Data from: International Labor Office, Studies and Reports, Series D (Wages and Hours of Work) No. 18; Wages and Hours of Work in the Coal Mining Industry, Geneva, 1923, pp. 117, 133, 272, 276.
[2] For foreign countries these figures include employers' contributions to social insurance.
[3] All bituminous mines.

While the wages paid in the United States are much higher than those paid in European countries, the productivity per worker is so much higher in the United States that the labor cost in this country is much less, as shown by the following table:

Ratio of wages, production of labor, horsepower, in specified industries, United States and Great Britain.[1]

Industry	Year	Average number wage earners	Wages received			Production							Value added by manufacture			Horsepower		
				Per wage earner		Quantity		Value	Per wage earner					Per wage earner			Per wage earner	
			Total	Amount	Per cent, Great Britain of United States	Unit	Number		Quantity	Value	Per cent, Great Britain of United States		Total	Amount	Per cent, Great Britain of United States	Total	Amount	Per cent, Great Britain of United States
											Quantity	Value						
Coal, bituminous:																		
United States	1925			$1,382					876									
Great Britain	1925			866	62.66				290		33.11							
Chemicals:																		
United States	1925	55,694	$80,434,642	1,444				$547,003,093		$9,822			$275,356,701	$4,944		657,867	11.81	
Great Britain	1924	56,701		596	41.27			246,551,678		4,348		44.27	111,703,131	1,970	39.85	228,761	4.03	34.12
Paints and varnish:																		
United States	1925	25,490	35,419,552	1,390				470,736,264		18,467			176,793,224	6,936		143,111	5.61	
Great Britain	1924	12,691		583	41.94			75,363,946		5,938		32.15	34,183,658	2,694	38.84	37,598	2.96	52.76
Soap:																		
United States	1925	15,406	18,526,104	1,203		Pounds	2,935,514,366	241,599,178	322,044	15,682			93,399,570	6,063		56,697	3.68	
Great Britain	1924	20,332		568	47.22	do	988,400,000	135,277,002	48,613	6,653	25.57	42.42	50,067,420	2,462	40.61	44,323	2.18	59.24
Brick tile and refractories:																		
United States	1925	102,777	127,127,485	1,237				333,730,417	190,544	3,247			233,717,333	2,274		517,204	5.03	
Great Britain	1924	63,664		560	45.27			91,084,277		1,431		44.07	63,018,252	990	43.54	163,409	2.57	51.09
Cement:																		
United States	1925	38,437	53,911,519	1,403		Barrel	161,658,901	300,895,070	4,206	7,828			186,726,101	4,858		871,650	22.68	
Great Britain	1924	11,868		660	47.04	do	18,282,020	33,794,957	1,540	2,848	36.61	36.38	20,667,442	1,741	35.84	112,140	9.45	41.67
China and earthenware:																		
United States	1925	36,536	46,768,867	1,280				111,078,028		3,040			77,152,272	2,112		50,141	1.37	
Great Britain	1924	64,271		436	34.06			76,949,672		1,197		39.38	47,739,628	743	35.18	43,048	.67	48.90
Blast furnaces (pig iron):																		
United States	1925	29,188	45,312,168	1,552		Long ton	36,495,562	765,286,229	1,250	26,219			147,869,349	5,066		1,380,394	47.29	
Great Britain	1924	25,209		711	45.81	do	7,345,000	160,732,542	291	6,376	23.28	24.32	22,845,055	906	17.88	474,232	18.81	39.78
Motor vehicles,[2] United States	1925	426,111	713,931,334	1,675		Number	4,064,309	4,721,402,556	10	11,080			1,750,489,293	4,108		1,172,013	2.75	
Motor and cycle trade, Great Britain	1924	172,593		670	40.00	do	[3] 948,600	414,404,527	5	2,401	50.00	21.67	200,221,094	1,160	28.24	194,151	1.12	40.73
Railway cars:																		
United States	1925	50,393	77,246,992	1,533				390,771,210		7,754			124,717,706	2,475		243,934	4.84	
Great Britain	1924	25,441		616	40.18			70,098,806		2,755		35.53	22,703,709	892	36.04	64,858	2.55	52.69
Electrical machinery and supplies:																		
United States	1925	239,921	323,834,541	1,350				1,540,022,041		6,419			903,309,965	3,765		589,398	2.46	
Great Britain	1924	123,127		501	37.11			308,920,622		2,509		39.09	147,499,018	1,198	31.82	157,225	1.28	52.03
Tools, saws, files, etc.:																		
United States	1925	34,259	45,560,780	1,330				161,585,251		4,717			110,819,709	3,235		104,507	3.05	
Great Britain	1924	24,230		487	36.62			44,387,076		1,832		38.84	24,903,407	1,028	31.78	61,931	2.56	83.93
Textile machinery and parts:																		
United States	1925	27,869	37,463,681	1,344				121,653,324		4,365			82,616,456	2,964		61,738	2.22	
Great Britain	1924	56,419		499	37.13			80,368,479		1,424		32.62	49,996,747	886	29.89	81,579	1.45	65.32
Lumber and timber products:																		
United States	1925	473,998	456,715,665	964				1,421,161,836		2,998			841,687,154	1,776		2,049,500	4.32	
Great Britain	1924	57,008		568	58.92			131,023,369		2,298		76.65	56,158,552	985	55.46	174,393	3.06	70.83
Furniture:																		
United States	1925	180,895	225,200,027	1,245				868,145,913		4,799			483,638,265	2,674		402,514	2.23	
Great Britain	1924	71,288		575	46.18			137,503,202		1,930		40.22	71,755,205	1,007	37.66	50,529	.71	31.84
Grain milling:																		
United States	1925	31,988	39,700,239	1,241				1,298,014,788		40,578			172,635,847	5,397		669,910	20.94	
Great Britain	1924	26,501		619	49.88			448,239,238		16,914		41.68	51,957,924	1,961	36.33	198,195	7.48	35.72
Cane sugar refining, United States	1925	14,502	18,955,114	1,307		Short ton, sugar	5,243,548	606,632,783	362	41,831						89,098	6.14	
Sugar and glucose, Great Britain	1924	11,356		694	53.10	do	1,107,960	234,872,961	98	20,683	27.07	49.44				38,860	3.42	55.70
Bakery products:																		
United States	1925	160,411	219,606,219	1,369				1,268,194,507		7,906			600,178,007	3,742		227,286	1.42	
Great Britain	1924	120,034		529	38.64			477,595,045		3,979		50.33	169,981,874	1,416	37.84	80,309	.67	47.18
Confectionery: United States	1925	63,600	55,234,527	868				379,081,441		5,960			173,648,774	2,730		100,455	1.58	
Cocoa and confectionery: Great Britain	1924	68,458		409	47.12			182,093,463		2,660		44.63	75,677,558	1,105	40.48	56,401	.82	51.90
Paper and paper board:[4]																		
United States	1925	123,842	160,145,932	1,293		Short tons	9,182,204	971,882,320	74	7,848			366,022,034	2,956		2,427,010	19.60	
Great Britain	1924	47,351		543	42.00	do	1,440,510	161,200,751	30	3,404	40.54	43.37	56,600,258	1,195	40.43	280,859	5.93	30.26
Wall paper:																		
United States	1925	5,069	5,862,765	1,157		do	[5] 104,554	30,069,005	21	5,931			15,069,964	2,973		11,528	2.27	
Great Britain	1924	3,930		516	44.60	do	45,192	12,606,301	11	3,208	52.38	54.09	6,912,705	1,759	59.17	4,296	1.09	48.02
Printing and publishing newspapers and periodicals:																		
United States	1925	117,001	217,540,967	1,859				1,447,661,177		12,373			1,068,120,575	9,129		237,662	2.03	
Great Britain	1924	39,468		672	36.15			198,564,695		5,031		40.66	137,158,671	3,475	38.07	63,980	1.62	79.80
Cotton spinning and weaving:																		
United States	1925	445,184	353,882,870	795		Cotton used, pounds	3,066,389,683	1,714,367,787	6,888	3,851			637,215,173	1,431		2,236,363	5.02	
Great Britain	1924	501,821		415	52.20	do	1,819,540,300	1,603,933,114	3,626	3,196	52.64	82.99	363,877,732	725	50.66	1,575,644	3.14	62.55
Woolen and worsted goods:																		
United States	1925	67,056	82,436,037	1,229				361,524,034		5,391			141,905,704	2,116		193,080	2.88	
Great Britain	1924	261,485		455	37.02								228,507,972	874	41.30	517,304	1.98	68.75
Cordage, twine; jute goods; linen goods: United States	1925	24,492	22,120,444	903				139,121,616		5,630			51,313,100	2,095		118,435	4.84	
Jute, hemp, linen, rope, twine, net: Great Britain	1924	71,041		372	41.20			138,483,791		1,949		34.31	48,022,320	676	32.27	125,139	1.76	36.36
Knit goods:																		
United States	1925	186,668	168,682,840	904				809,960,213		4,339			365,034,433	1,907		176,630	.95	
Great Britain	1924	88,720		391	43.25			187,605,959		2,115		48.74	67,285,136	758	39.75	29,691	.33	34.74
Leather:																		
United States	1925	53,043	66,762,077	1,259				462,013,572		8,710			155,379,595	2,929		222,678	4.20	
Great Britain	1924	28,079		585	46.47			145,533,425		5,183		59.51	38,477,045	1,370	46.77	74,283	2.65	63.10
Boots and shoes:																		
United States	1925	206,992	225,787,981	1,091		Pair	323,553,055	925,383,422	1,563	4,793			443,751,458	2,144		139,569	.67	
Great Britain	1924	130,647		511	46.84	do	117,456,000	209,488,094	899	1,603	57.52	33.44	110,561,197	846	39.45	62,663	.48	71.64
Saddlery, harness, trunks, bags, and miscellaneous:																		
United States	1925	21,603	25,681,065	1,189				131,819,374		6,102			61,188,017	2,832		16,137	.75	
Great Britain	1924	18,032		418	35.16			29,545,741		1,639		26.86	13,900,500	771	27.22	5,266	.29	38.67

[1] Sources: United States, Bureau of the Census, Biennial Census of Manufactures, 1925. Great Britain, Board of Trade, Third Census of Production, 1924, Preliminary Reports. Data for British wages were obtained from the British Ministry of Labor Gazette, July, 1927, p. 250, and other numbers there referred to. The British wages are the total wages actually paid in four weeks of 1924 in January, April, July, and October, divided by the number of wage earners in those weeks. The weekly wage is multiplied by 51 to obtain the yearly wage to compare with the United States wage which assumes continuous employment. Data for coal from International Labor Office, Wages and Hours of Work in the Coal Mining Industry, Geneva, 1928.

[2] Not including motor cycles.
[3] Motor cars and chassis, 146,600.
[4] Includes manufactures of wood pulp.
[5] Hanging paper produced.

Average wages per metric ton of coal mined (including, in Europe, employers' contributions to social insurance), 1925 [3]

United States (bituminous coal), 1926	$1.52
Germany, Ruhr	2.21
Belgium	3.41
France	3.79
Great Britain	3.28
Poland	1.40
Czechoslovakia	2.06

2. *Industrial census statistics.*—For many years the United States Bureau of the Census has periodically collected statistics of manufactures, showing, among other things, for each of the principal industries, average number of wage earners, total wages paid, quantity (where possible) and value of product, value added by manufacture, and horsepower used.

The average number of wage earners is obtained by adding the number employed on the 15th day of each month and dividing by 12. The average annual wage has been calculated by dividing the total wages paid in the year by the average number of wage earners.

The value of product is the selling value, at the factory, of all the products manufactured during the year, whether sold or not.

The value added by manufacture is the difference between the cost of materials (including fuel, mill supplies, etc.) and the value of the products.

The United States census of mines and quarries, embracing substantially the same classes of information as the census of manufactures, is taken decennially, the latest published reports being for 1919.

In 1924 a general census of production was taken in Great Britain, and the results have been published in special supplements of the Board of Trade Journal. The British production statistics include for the several industries the quantity (where possible) and value of products, the value added by manufacture, and the horsepower employed.

Data for British wages were obtained in connection with the census of production of 1924. For each of four weeks in 1924, viz: In January, April, July, and October, the total number of wage earners and the total wages paid were ascertained for the several industries. The earnings per week are the result derived by dividing the wages paid by the number of wage earners. Value of production and value added by manufacture are derived, as are the corresponding United States figures.

The classifications for the several industries are not in every case exactly alike in the United States and British censuses, but where used in this study, if not identical, are considered sufficiently similar to permit comparison.

The national statistical office of Germany in 1925 took a census of the number of persons employed and the horsepower used in all the industries. The same office also collects from time to time statistics for several of the most important industries of the average number of workers employed, the wages paid, and the production. These figures are published in the annual yearbook, in the official periodical of the statistical office (Wirtschaft und Statistik) and in a special supplement of the periodical, Industrielle Produktionsstatistik, 1928.

[3] International Labor Office, Wages and Hours of Work in the Coal Mining Industry, 1928, pp. 139, 278.

The German statistical office also publishes statistics of wage rates for a number of important industries as specified in labor agreements. The following tables compare for the United States and Great Britain wages, productivity of labor, and horsepower for some of the most important industries. The figures are obtained from industrial census and other production statistics as just described.

Because the production of most manufactured articles, owing to their diversity, can not well be recorded in quantities, values must usually be employed for comparison. In comparing production the value added by manufacture is preferable to value of product. The value of the product includes the value of the raw material entering into the article produced, while the value added by manufacture includes only the value created by the manufacturing process. Since the kinds of raw material entered into the manufactured articles compared may be of incomparable qualities and values, a comparison of the value of products may be an inaccurate portrayal of the productivity of the manufacturing processes. This defect, however, does not apply to value added by manufacture, and therefore such values are appropriate, where obtainable, for a comparison of productivity.

The following table summarizes for each of the industries covered in the preceding table the percentage that the average British wage is of the United States wage and the percentage that the British productivity per workman is of the United States productivity per workman. While the British wage in each industry is only a fraction of the American wage, the British productivity per workman is only a fraction of the American productivity per workman. The British fraction of productivity is greater than the British fraction of wages by more than a negligible amount in only one case. In most cases the British fraction of wages is higher than the British fraction of productivity.

Relative wages and productivity of United States and British labor

Industry	Per cent British—		Industry	Per cent British—	
	Wage is of United States wage	Productivity per worker is of United States productivity per worker		Wage is of United States wage	Productivity per worker is of United States productivity per worker
Coal, bituminous	62.66	[1] 33.11	Grain milling	49.88	36.33
Chemicals	41.27	39.85	Sugar	53.10	[1] 27.07
Paints and varnish	41.94	38.84	Bakery products	38.64	37.84
Soap	47.22	40.61	Confectionery	47.12	40.48
Brick, tile, and refractories	45.27	43.54	Paper and paper board	42.00	40.43
Cement	47.04	[1] 36.61	Wall paper	44.60	[1] 52.38
China and earthenware	34.06	35.18	Printing and published newspapers and periodicals	36.15	38.07
Pig iron	45.81	[1] 23.28	Cotton spinning and weaving	52.20	[1] 52.64
Motor vehicles	40.00	28.24	Woolen and worsted goods	37.02	41.30
Railway cars	40.18	36.04	Cordage, twine, etc	41.20	32.27
Electrical machinery and supplies	37.11	31.82	Knit goods	43.25	39.75
Tools, saws, files, etc	36.62	31.78	Leather	46.47	46.77
Textile machinery	37.13	29.89	Boots and shoes	46.84	39.45
Lumber and timber products	58.92	55.46	Saddlery, harness, trunks, etc	35.16	27.22
Furniture	46.18	37.66			

[1] Quantity.

The relative wages and productivity of British and American labor may also be shown in another way.

The following table, derived from the large preceding table, shows for various industries, the comparative value produced for each dollar paid out in wages in the United States and Great Britain. The quantities produced for each dollar of wages are also shown for several industries. With respect to the quantities of goods produced for each dollar of wages, it appears that the British production is much less in coal, soap, cement, pig iron, and sugar refining. In these industries the British labor cost is much higher than the American labor cost. It is probable that a larger percentage of high-grade soap is included in the British than in the American figures, and this partly accounts for the great difference in quantity production. In the paper industries the British and American manufacturers obtain the same quantity of product for a dollar of wages. In the cotton industry the British use slightly more cotton than the American for each dollar paid out in wages. In the boot and shoe industry a dollar in wages produces more shoes in Great Britain than in the United States but the value of the British shoes is less.

In wall paper and in printing and publishing a dollar spent for labor brings greater value returns in Great Britain than in the United States. In china and earthenware, wool goods, and leather the returns for the labor dollar are about the same; in all the other industries the value returns for a dollar spent for labor are greater in the United States than in Great Britain.

Productivity and wages, United States and Great Britain

Industry	Value produced [1] for each dollar paid out for labor		Quantity produced for each dollar paid out for labor		
	United States	Great Britain	Unit	United States	Great Britain
Coal, bituminous			Thousand tons	0.63	0.33
Chemicals	$3.42	$3.31			
Paints and varnish	4.99	4.62			
Soap	5.04	4.33	Pound	158.39	85.59
Brick tile and refractories	1.84	1.77			
Cement	3.46	2.64	Barrel	3.00	2.33
China and earthenware	1.65	1.70			
Pig iron	3.26	1.27	Long ton	.81	.41
Motor vehicles	2.45	1.73			
Railway cars	1.61	1.45			
Electrical machinery and supplies	2.79	2.39			
Tools, saws, files, etc	2.43	2.11			
Textile machinery and parts	2.21	1.78			
Lumber and timber products	1.84	1.73			
Furniture	2.15	1.75			
Grain milling	4.35	3.17			
Cane sugar refining			Short ton	.28	.14
Bakery products	2.75	2.68			
Confectionery	3.15	2.70			
Paper and paper board	2.29	2.20	Short ton	.06	.06
Wall paper	2.57	3.41	do	.02	.02
Printing and publishing	4.91	5.17			
Cotton spinning and weaving	1.80	1.75	Cotton used, pound	8.66	8.74
Woolen and worsted goods	1.72	1.92			
Cordage, twine, jute, etc	2.32	1.82			
Knit goods	2.11	1.94			
Leather	2.33	2.34			
Boots and shoes	1.97	1.66	Pair	1.43	1.76
Saddlery, harness, trunks, bags, etc	2.39	1.84			

[1] Value added by manufacture.

The following table covers all the manufacturing industries in the United States and practically all the manufacturing industries of Great Britain. If the average annual value added by manufacture per wage earner is divided by the average wage, the result is the value produced for each dollar paid out in wages. The table shows that for every dollar paid out in wages the American manufacturer obtains a net production valued at $2.50, while the British employer obtains a net production valued at $2.14.

Wages and productivity in manufacturing industries, United States (1925) and Great Britain (1924) [1]

Country	Number of wage earners	Wages paid	Average wage per year	Per cent foreign is of domestic wage	Valued added by manufacture	Value added by wage earner		Value of net production for each dollar paid in wages
						Amount	Per cent foreign is of domestic	
United States (1925)	8, 384, 261	$10, 729, 968, 927	$1, 280	-------	$26, 778, 066, 026	$3, 194	-------	$2. 50
Great Britain (1924)	4, 314, 000	----------	[2] 513	40. 08	4, 729, 350, 425	1, 096	34. 41	2. 14

[1] From Census reports.
[2] Weighted average wage for manufacturing industries.

If the dollar represents a certain amount of commodities in each country,[4] the American manufacturer, for the amount of commodities represented by the dollar given out in wages, obtains in net production two and a half times the amount given to labor and the British manufacturer receives 2.14 times the amount of goods given to labor.

Irrespective of the amount of commodities represented by a dollar (the price level), the figures show that the American manufacturer obtains for his wage expenditure a greater ratio of return than the British manufacturer.

According to numerous statistics of basic materials, shown in the following chapter, the British price level of such materials is about 85 per cent of the United States level. The fact that the United States exports a wide variety of manufactured goods all over the world, however, would support the conclusion that there is less difference in the general price level between the two countries.

The foregoing tables, which compare wages and production in the United States and Great Britian, are therefore probably a rough picture of actual conditions. They show that the American wage earner receives much higher renumeration than the British workman, but that for every unit of goods received as wages, the American workman turns back more in production than the British workman. As a productive machine the American workman with his high consumption is more profitable than the British workman with his low consumption. The American manufacturer does not therefore in general suffer in competition with the British manufacturer because of labor costs. The high American wages are more than compensated by high labor productivity. This is a general statement, however, and does not necessarily apply to any individual commodity mentioned in the above tables.

[4] The amount of commodities represented by the dollar may be different in the United States from what it is in Great Britain. This is discussed later.

Ratio of wages, production of labor, horsepower, in specified industries, United States and Germany[1]

Industry	Country	Year	Average number employed	Wages and salaries received			Production							Value added by manufacture			Horsepower[2]		
				Total	Per employee		Unit	Quantity	Value	Per employee		Per cent Germany of the United States		Total	Per employee		Total	Per employee	
					Amount	Per cent Germany of the United States				Quantity	Value	Quantity	Value		Amount	Per cent Germany of the United States		Amount	Per cent Germany of the United States
Coal, bituminous[3]	Germany (Ruhr)	1925			$601	43.49	1,000 tons			296									
Do	United States	1926			1,382		do			876		33.96							
Petroleum	Germany	1926	1,699	$644,807	380	25.08	Barrel	667,623	$2,224,788	393	$1,309	12.45	20.91					4.90	29.82
Petroleum and natural gas	United States	1919	110,887	167,989,615	1,515		do	350,112,253	694,026,948	3,157	6,259						1,821,342	16.43	
Petroleum refining	Germany	1925	2,799	1,317,164	470	27.20			25,619,005		9,152		29.50					2.56	49.71
Do	United States	1925	76,527	132,285,793	1,729				2,376,656,556		31,056						393,753	5.15	
Coke	Germany	1925	28,448	14,912,000	524	30.73			195,303,000		6,900		48.94					5.58	36.61
Do	United States	1925	26,870	45,815,000	1,705				378,634,000		14,100						409,552	15.24	
Iron ore	Germany	1926	14,195	5,828,278	411	24.23	Gross ton	4,717,253	11,367,380	332	801	26.45	17.91					4.64	60.97
Do	United States	1919	48,726	82,650,119	1,696		do	61,173,254	217,949,311	1,255	4,473						370,869	7.61	
Pig iron	Germany	1924	24,371		465	29.02	do	7,832,600		321		29.21						11.62	30.90
Do	United States	1925	36,712		1,605		do	40,361,146		1,099							1,380,394	37.60	
Iron and steel foundries	Germany	1926	118,637	53,056,668	447	27.39			153,182,132		1,291		27.56					1.27	42.47
Foundries, machine shops	United States	1925	476,755	778,031,605	1,632				2,232,985,974		4,684						1,424,259	2.99	
Cement	Germany	1925	22,965				Barrel[4] (1927)	42,000,000		1,829		50.41					172,767	7.52	38.84
Do	United States	1925	45,033				Barrel	163,388,244		3,628							871,650	19.36	
Sulphur	Germany	1927	891	459,354	516	29.90			1,024,695		1,150		7.78						
Do	United States	1919	1,214	2,095,189	1,726				17,935,882		14,774						15,291	12.60	
Graphite	Germany	1927	291	84,361	290	27.75			145,910		501		25.59					2.22	15.37
Do	United States	1919	444	463,876	1,045				869,403		1,958						6,410	14.44	
Salt	Germany	1925	3,426	1,422,000	415	30.79			4,349,000		1,300		27.08						
Do	United States	1925	7,165	9,655,000	1,348				34,253,000		4,800								
Sugar refining	Germany	1925	7,410			[5] 38.48	Short ton	882,785		119		35.95					23,615	3.19	58.53
Do	United States	1925	16,359				do	5,411,717		331							89,098	5.45	
Paper and wood pulp	Germany	1925	117,174			[5] 29.50	Short tons paper	2,268,533		19.36		28.65						6.45	36.11
Do	United States	1925	135,874				do	9,182,204		67.58							2,427,010	17.86	
Motor vehicles	Germany	1925	86,642	42,409,156	489	37.88			183,596,326		2,119		21.40	92,276,450	1,065	[6] 28.61		.79	31.98
Do	United States	1925	479,380	840,783,716	1,754				4,745,660,479		9,900			1,784,914,767	3,723		1,184,622	2.47	
Rubber tires	Germany	1927	10,095	4,532,232	449	28.20			48,851,244		4,839		50.25	20,796,652	2,060	[6] 52.43		1.95	46.43
Do	United States	1925	96,063	152,964,444	1,592				925,001,520		9,629			377,436,405	3,929		403,227	4.20	
Leather tanneries	Germany	1926	36,963	17,373,708	470	33.84			162,073,372		4,385		54.86	51,819,107	1,402	[6] 49.88		2.16	56.10
Do	United States	1925	57,803	80,259,587	1,389				462,013,572		7,993			162,462,840	2,811		222,678	3.85	
Linen cloth and yarn	Germany	1927	14,783			[6] 35.00								7,960,873	539	[6] 31.84		.80	19.75
Linen goods	United States	1925	2,992	3,096,411	1,035									5,066,011	1,693		12,119	4.05	
Jute spinning and yarn making	Germany	1927	14,037			[6] 35.00								12,193,681	869	[6] 43.62		1.34	31.46
Jute goods	United States	1925	6,757	6,868,744	1,017									13,457,679	1,992		28,753	4.26	
Silk weaving	Germany	1926	36,778	13,970,365	380	32.73								42,839,280	1,165	[6] 49.20		.49	32.67
Silk manufacture	United States	1925	141,426	164,217,590	1,161				808,976,399		5,720			334,829,796	2,368		212,609	1.50	
Spinning hemp, thread, twine, rope	Germany	1926	8,500			[6] 35.00								7,629,200	898	[6] 42.80		2.01	43.70
Cordage and twine	United States	1925	16,866	17,787,638	1,055				100,447,564		5,956			35,378,204	2,098		77,563	4.60	
Cotton spinning and twisting	Germany	1926	96,897			[6] 35.00								58,383,296	603	[6] 40.42		3.11	63.73
Cotton spinning and weaving	United States	1925	458,008	390,462,093	853				1,714,367,787		3,743			700,120,886	1,529		2,236,363	4.88	

[1] Sources: United States—Bureau of the Census, Biennial Census of Manufactures, 1925; Fourteenth Census of the United States, Mines and Quarries, 1919. Germany—Statistisches Reichsamt, Industrielle Produktionsstatistik, Berlin, 1928; Statistisches Jahrbuch für das Deutsche Reich, Berlin, 1928; Wirtschaft und Statistik.

[2] The figures of horsepower per employee for Germany are obtained from the German Statistisches Jahrbuch for 1928. They are the total horsepower divided by the number employed in the specified industry in 1925.

[3] Data from: International Labour Office, Wages and Hours of Work in the Coal Mining Industry, Geneva, 1926.

[4] German production data obtained from United States Commerce Reports, July 30, 1928, p. 258. The production is for 1927 while the number employed in the industry is for 1925. The production in 1927 was greater than in 1925, so that the number employed in the industry was probably not smaller than in 1925. The probable error would tend to make the 1927 German production, per employee, too high.

[5] From table in Appendix A.

[6] The "Value added by manufacture" is the value of product less the value of raw materials. The values of fuel, purchased power, and mill supplies are included in the "Value added by manufacture." They were not separated in the German figures, and therefore the United States figures were adjusted to include them on the basis of the percentage in 1927 that costs of fuel, power, and mill supplies were of raw materials, purchased power and mill supplies combined.

If the American manufacturer suffers in competition with the British it is mainly because of a higher price level in this country.

Of course, there are some exceptions to the above generalization. If the United States, because of general high efficiency and mass production, has a high wage level, it may be impossible for certain industries, which require a high proportion of hand labor, to pay the prevailing wages and meet foreign competition. This subject will also be treated more fully later.

The following table gives a comparison of wages and labor productivity between the United States and Germany. The table is arranged similarly to the table comparing wages and productivity of the United States and Great Britain.

The table below gives the ratios of German wages and productivity to United States wages and productivity. It shows for most commodities listed a close relationship between the German productivity and wages compared with the United States standards. In coke, textiles, rubber tires, and leather tanning the figures show an German advantage in labor costs.

Relative wages and productivity of United States and German labor

Commodity	Per cent that German wage is of United States wage	Per cent productivity per German workman is of productivity per United States workman
	Per cent	*Per cent*
Coal	43.49	[1] 33.96
Petroleum	25.08	[1] 12.45
Petroleum refining	27.20	29.50
Coke	30.73	48.94
Iron ore	24.23	26.45
Pig iron	29.02	[1] 29.21
Foundry products	27.39	27.56
Cement		[1] 50.41
Sulphur	29.90	7.78
Graphite	27.75	25.59
Salt	30.79	27.08
Sugar	38.48	[1] 35.95
Paper and wood pulp	29.50	[1] 28.65
Motor vehicles	37.88	28.61
Rubber tires	28.20	50.25
Leather tanneries	33.84	49.88
Linen	35.00	31.84
Jute	35.00	43.62
Silk	32.73	49.20
Cordage and twine	35.00	42.80
Cotton spinning and weaving	35.00	40.42

[1] Quantity.

The following table gives the same statistics in terms of production per dollar expenditure for wages:

Productivity and wages, United States and Germany

Industry	Value produced for each dollar paid out for labor		Quantity produced for each dollar paid out for labor		
	United States	Germany	Unit	United States	Germany
Coal			M ton	0.63	0.49
Petroleum production	[1] $4.13	[1] $3.44	Barrel	2.08	1.04
Petroleum refining	[1] 17.96	[1] 19.47			
Coke	[1] 8.27	[1] 13.17			
Iron ore	[1] 2.64	[1] 1.95	Ton	.74	.81
Pig iron			do	.68	.69
Iron and steel foundries	[1] 2.87	[1] 2.89			
Sulphur	[1] 8.56	[1] 2.25			
Graphite	[1] 1.87	[1] 1.73			
Salt	[1] 3.56	[1] 3.13			
Motor vehicles	[2] 2.10	[2] 2.18			
Rubber tires	[2] 2.39	[2] 4.59			
Leather tanneries	[2] 1.94	[2] 2.98			
Silk weaving	[2] 1.98	[2] 3.07			

[1] Total value of product.
[2] Value added by manufacture.

The foregoing statistics show that, generally speaking, the high level of wages in the United States has been caused by a productivity superior to that of other nations. This is further demonstrated by the fact that a large proportion of our manufactures can compete in world markets with the goods of foreign countries. (See Ch. IV.)

In many cases where the tariff is necessary it appears that natural conditions are unfavorable in this country, or that an unusual amount of hand labor is required. These industries have to pay the prevailing high wage established by high productivity, and, handicapped by paucity of natural resources or inability to employ machine methods, can not compete without the tariff.

CHAPTER II

PRICE LEVELS IN THE UNITED STATES, GREAT BRITAIN, AND GERMANY

Notwithstanding the importance of a comparison of domestic and foreign price levels, very little information is available on this subject. Although price indexes of most commercial countries are published, these indexes show only the movement of prices within the country. Each country employs its own index base. But just how the basic prices of one country compare with the basic prices of another country is not stated. These indexes, therefore, do not show how the price level of one country compares with that of another country. Because of the great variations in the qualities and styles of most manufactured articles, it is almost impossible to make international price comparisons of finished goods. About the best that can be done is to make a comparison of standard grades of the principal materials that enter into finished manufactures. Such comparable materials include: A number of chemicals; certain oils and fats; metals and semimanufactured metal products such as bars, structural shapes and sheets; certain nonmetallic minerals such as china clay and fluorspar; certain agricultural products; and certain textiles.

The following tables give comparative prices of commodities as described above. The prices have been obtained from reliable sources, including special investigations and inquiries, trade publications, Government reports, etc.

Prices of certain chemicals in United States and foreign countries, 1928

[Per pound]

Products	United States (New York)	England (Manchester)	Per cent England of United States	France (Paris)	Per cent France of United States	Germany at warehouse or factory	Per cent Germany at warehouse or factory of United States	Germany export f. o. b. Hamburg	Per cent Germany export of United States
Acetone	$0.1400	$0.1589	113.50	$0.2019	144.21	$0.1585	113.21	$0.1546	110.43
Acetic acid, glacial	.1247	.1434	115.00	.1268	101.68	.1966	157.66	.1126	90.30
Aluminum sulphate	.0175	.0137	78.29	.0107	61.14	.0124	70.86	.0130	74.29
Ammonium carbonate	.0875	.0565	64.57	----	----	.0494	56.46	.0451	51.54
Ammonium chloride	.0470	.0419	89.15	----	----	.0387	82.34	.0336	71.49
Ammonium sulphate	.0238	.0227	95.38	[1].0225	94.54	----	----	----	----
Amyl acetate	.2612	.2551	97.66	----	----	.2674	102.37	----	----
Barium carbonate, natural	----	.0116	----	.0223	----	----	----	----	----
Barium carbonate, precipitated	.0263	.0180	68.44	.0191	72.62	.0162	61.60	.0146	55.57
Barium chloride	.0290	.0191	65.86	.0216	74.48	.0174	60.00	.0153	52.76
Barytes	.0115	.0087	75.65	.0057	----	----	49.57	----	----
Bleaching powder	[1].0220	.0152	69.09	.0141	64.09	.0174	79.09	.0132	60.00
Borax	.0331	.0435	131.42	.0466	140.79	.0522	157.70	.0371	112.08
Boric acid	.0840	.0652	77.62	.0724	86.19	.0818	97.38	.0701	83.43

[1] Factory.

Prices of certain chemicals in United States and foreign countries, 1928—Contd.

[Per pound]

Products	United States (New York)	England (Manchester)	Per cent England of United States	France (Paris)	Per cent France of United States	Germany at warehouse or factory	Per cent Germany at warehouse or factory of United States	Germany export f. o. b. Hamburg	Per cent Germany export of United States
Bromine liquid	$0.4500			$0.4031	89.58	$0.3025	67.22		
Butyl acetate	[1].1958	$0.2602	132.89	[1].2408	122.98				
Butyl alcohol	.1779	.2522	141.76	[1].2184	122.77				
Caffeine	2.9100			1.7529	60.24	1.2921	44.40		
Carbon bisulphide		.0508		.0462		.0400			
Carbon tetrachloride	.0681	.0798	117.18	.0953	139.94	.0820	120.41	$0.0886	130.10
Citric acid	.4600	.5023	109.20	.5179	112.59				
Copper sulphate	.0519	.0564	108.67	.0577	111.18				
Diethylbarbituric acid	4.6000			1.5544	33.79	1.3911	30.24		
Ethyl acetate	.1465	.1714	117.00	[1].1626	110.99				
Formic acid	.1000	.1002	100.20	.0984	98.40	.0762	76.20	.0804	80.40
Hexamethylenetetramine	.6200			.4834	77.97	.3638	58.68		
Hydrogen peroxide, 30 per cent Tech.	.2400					.1819	75.79		
Hydrogen peroxide, 12 volumes	.0344	.0401	116.57	.0248	72.09				
Iodine	4.6500	3.8932	83.72	4.6697	100.42	5.1862	111.53		
Litharge	.1073	.0617	57.50	.0719	67.01	.0724	67.47	.0657	61.23
Lithophone	.0573	.0489	85.34	.0409	71.38	.0476	83.07	.0398	69.46
Magnesium chloride	.0155	.0147	94.84			.0052	33.55	.0106	68.39
Magnesium sulphate	.0171					.00432	25.26	.00472	27.60
Menthol	4.5800			3.1191	68.10	4.4570	97.31		
Mercuric chloride, corrosive sublimate	1.6500	1.2724	77.12	1.3659	82.78				
Oxalic acid	.1160	.0682	58.79	.0889	76.64	.0661	56.98	.0642	55.34
Phosphoric acid, 50 per cent Tech.	.0700	.0664	94.86	.0845	120.71				
Phosphoric acid	.1600					.1513	94.56		
Potassium bichromate	.0856	.0824	96.26	.1033	120.68	.0909	106.19	.0841	98.25
Potassium bromide	.4200			.3690	87.86	.3038	72.33	.3065	72.98
Potassium chlorate	.0830	.0576	69.40	[1].0682	82.17	.0463	55.78	.0497	59.88
Potassium ferrocyanide	.1800			.1626	90.33	.1471	81.72	.1298	72.11
Potassium hydrate (caustic potash)	.07125	.0722	101.33			.0614	86.18	.0650	91.23
Potassium nitrate, refined	.0600	.0451	75.17	.0523	87.17	.0485	80.83	.0469	78.17
Potassium permanganate	.1500	.1039	69.27	.1608	107.20	.0966	64.40	.0985	65.67
Potassium prussiate, red	.3700	.4258	115.08	.3401	91.92	.3186	86.11		
Red lead	.1073			.0625	58.25	.0714	66.54	.0646	60.21
Sodium acetate	.0450	.0450	100.00	.0458	101.78	.0447	99.33	.0446	99.11
Sodium arsenate		.0565		.0742					
Sodium bichromate	.0681	.0714	104.85	.0767	112.63	.0726	106.53	.0660	96.92
Sodium bromide	.4200			.3645	86.79	.3214	76.52	.3228	76.86
Sodium carbonate	.01325	.0133	100.38	[2].0098	73.96				
Sodium chlorate	[1].0600	.0534	89.00	[1].0656	109.33				
Sodium cyanide	.1900	.1420	74.74	.1145	60.26				
Sodium fluoride				[1].0836					
Sodium hyposulphate	[1].0240	.0198	82.50	.0248	103.33				
Sodium phosphate (Di)	.0325	.0267	82.15	.0347	106.76	.0240	73.84	.0252	77.54
Sodium silicofluoride	.0460					.0380	82.61		
Sodium sulphate (Glaubers salt)	.0079	.0059	74.68	[3].0177	224.05	.0047	59.49	.0046	58.23
Sodium sulphate, anhydrous	.0250			[1].0068	27.20	.0063	25.20	.0062	24.80
Sodium sulphide	.0350	.0209	59.71	[3].0254	72.57	.0205	58.57	.0167	47.71
Tartar emetic	.3330	.2192	65.83			.3115	93.54		
Tartaric acid	.3700	.3248	87.78	.3219	87.00	.3543	95.76	.3036	82.05
White arsenic	.0400	.0371	92.75	.0467	116.75				
White lead	.0850					.0776	91.29	.0777	91.41
Zinc sulphate	.0350	.0238	86.57	.0138	39.43	.0216	61.71	.0220	62.85
Simple average of percentages			90.74		92.53		78.24		73.44

[1] Factory.
[2] Varangeville.
[3] Dep. nord.

Prices of certain animal and vegetable oils and fats in various markets [1]

Oil of fat	Cents per pound	Per cent foreign is of domestic
Tallow:[2]		
Edible, Chicago	9.5	
Beef, London	9.4	98.95
Packers No. 2, Chicago	7.1	
French Town, London	8.3	116.90
Coconut oil:		
Edible Cochin, New York [3]	11.6	
East Indian Cochin, c. i. f. London [3]	11.3	97.41
Inedible Manila, New York [3]	10.6	
B. I. Ceylon, London [3]	9.7	91.51
Cottonseed oil:		
Prime summer yellow, loose basis, Chicago	10.5	
Refined, naked, ex-mill, Hull [3]	8.9	84.76
Crude, f. o. b. United States mill [4]	8.2	
Crude, naked, ex-mill, London [4]	7.6	92.68
Whale oil:[2]		
No. 1 and No. 3, average, United States Pacific coast tanks	7.4	
No. 0/1, c. i. f. London	7.0	94.59
Palm oil:[2]		
Inedible, New York	8.6	
Bonny Old Calabar, London	8.0	93.02
Soybean oil:[2]		
Crude, New York	12.5	
Crude, Hull	8.2	65.60
Peanut oil:[2]		
Crude, New York	12.4	
Crushed, extracted, hull	9.8	79.03
Simple average		91.44

[1] From detailed statistics collected by United States Tariff Commission.
[2] Simple average prices for the 4 years 1924–1927.
[3] Simple average prices for the 3 years 1924–1926.
[4] Simple average price for the year 1927.

Net prices per gross ton of metal products and coke in United States and certain foreign countries, 1928

Commodity	United States (Pittsburgh)	England		Germany		France	
		Price	Per cent of United States price	Price	Per cent of United States price	Price	Per cent of United States price
Billets (steel)	$32.95	$29.04	88.13	$27.83	84.46	$22.00	66.77
Rails	43.00	39.40	91.63	33.85	78.72	31.94	74.28
Structural shapes	42.54	38.15	89.68	32.93	77.41	25.70	60.41
Steel bars	42.43	36.09	85.06	33.65	79.31	27.32	64.39
Steel wire	54.84	47.48	86.58	53.18	96.97	38.81	70.77
Black sheets (24 gage)	61.87	53.22	86.02	54.01	87.30	61.62	99.60
Galvanized sheets (24 gage)	80.70	[1] 65.01	80.56	[1] 84.75	105.02	[1] 76.72	95.07
Tank plates	42.45	41.77	98.40	37.66	88.72	32.74	77.13
Coke	2.79	2.76	98.92	4.60	64.87	5.31	190.32
Basic pig iron	18.44	15.81	85.74	21.26	115.29	18.99	102.98
Foundry pig iron	19.03	15.92	83.66	18.86	99.11	17.59	92.43
Wire rods	42.82	37.80	88.28				
Galvanized wire	68.34	60.88	89.08				
Sheet bars	33.36	28.49	85.40				
Ferromanganese	[2] 103.17	[3] 66.91	64.85	[2] 66.50	64.46		
Ferrotungsten (per pound tungsten)	.96	.31	32.29				
Spiegeleisen	[4] 31.92	[5] 36.53	114.44				
Ferrochromium (4–6 per cent carbon, 60–70 per cent chrome; per pound chrome contained)	.11	.07	66.36				
Ferrovanadium (pound vanadium contained)	3.40	3.45	101.47				
Ferrocarbon titanium (15–18 per cent titanium)	[6] 200.00	276.00	[6] 138.00				
Ferrophosphorus	[7] [8] 122.50	87.38	[9] 71.33				
Tin plates (100 pounds)	5.26	4.13	78.52				
Simple average			86.56		95.14		90.38

[1] Corrugated.
[2] 80 per cent.
[3] 76–80 per cent.
[4] 19–21 per cent.
[5] 18–20 per cent.
[6] Net ton.
[7] Alabama.
[8] 24 per cent.
[9] 20–25 per cent.

Prices of certain nonferrous metals in United States and England, 1928

Article	Unit	United States		Foreign		Foreign of United States
		Market	Price	Market	Price	
						Per cent
Antimony	Pound	New York	$0.103	England	$0.0963	93.50
Bismuth, metallic	do	do	1.900	London	1.975	103.95
Cadmium, metallic	do	do	.699	do	.65	92.99
Copper, electrolytic	do	do	.145	do	.150	103.95
Graphite	do	do	6.98	do	5.76	82.52
Lead	do	do	.063	do	.046	73.02
Magnesium	do	do	.97	do	.965	99.48
Nickel	do	do	.35	do	.375	107.14
Quicksilver	76-pound flask	do	1.62	do	1.44	88.89
Zinc	Pound	St. Louis	.060	do	.055	91.67
Average						93.66

Prices of certain nonmetallic minerals and products in United States and foreign countries

Commodity	Year	Unit	United States		Foreign		Foreign of United States
			Market	Price	Market	Price	
							Per cent
China clay (paper filler of medium quality).	1927	Short ton	Georgia	$8.00	England	$4.88	61.00
Magnesite, caustic	1924	do	Eastern United States.	58.22	Rotterdam	29.85	51.27
Fluorspar	1925	do		16.54	England	7.21	43.59
Glass	1928	Box, 150 square inches.		2.09	Belgium	1.07	51.20
Do	1928	Box, 150–384 square inches.		2.40	do	1.34	55.83
Do	1928	Box, 720–864 square inches.		2.79	do	1.56	55.91

Foreign and domestic prices of certain agricultural products

UNITED STATES

Commodity	Year	Place	Grade	Unit	Price
Corn	1927	Chicago	No. 3 yellow	Bushel	$0.84
Wheat	1928	Minneapolis	No. 1 northern spring	do	1.40
Barley	1927–28	Chicago	Feed	48 pounds	.86
Oats	1927–28	do	No 2 white	32 pounds	.58
Rye	[1] 1928	Minneaplis		Bushel	1.11
Cottonseed	1926–27	Memphis		Short ton	26.57
Cotton	1927–28	New York	Middling	Pound	.205
Lard	1927	Chicago	Comparable grades	do	.137
Bacon	1927	do		do	.187
Dressed beef	[2] 1928	New York	Comparable grades	do	.19
Tallow	[2] 1928	Chicago	do	do	.925
Butter	1927	do	92 score	do	.47
Swiss cheese	1928	New York		do	.47
Salmon, canned	1927	Seattle	Sockeye	12½-pound cans	2.50
Rice	1927–28	New Orleans		Pound	.0385
Beans, dried	1926	San Francisco		do	.0588
Peas, split	1928	New York		do	.0654
Onions	1926–27	do	Strong	do	.0201
Flaxseed	1927–28	Minneapolis		Bushel	2.24

[1] 10 months.
[2] 9 months.

Foreign and domestic prices of certain agricultural products—Continued

FOREIGN

Commodity	Place	Grade	Unit	Price	Foreign is of domestic price
					Per cent
Corn	Liverpool	American mixed	Bushel	$1.06	126.19
Wheat	Liverpool (1927-28)	No. 3 Manitoba	do	1.60	114.29
Barley	Liverpool	American feed	46 pounds	1.07	124.42
Oats	London	Home-grown white	32 pounds	.76	131.03
Rye	Berlin		Bushel	1.50	135.14
Cottonseed	Hull	Sakellarides	Short ton	39.83	149.91
Cotton	Liverpool	Middling	Pound	.227	110.73
Lard	do		do	.142	103.65
Bacon	London		do	.211	112.83
Dressed beef	do		do	.12	63.16
Tallow	do		do	.873	94.38
Butter	do	92 score	do	.38	80.85
Swiss cheese	Switzerland		do	.30	63.83
Salmon, canned	London	Sockeye	12 ½-pound cans	2.28	91.20
Rice	do		Pound	.0311	80.78
Beans, dried	Imports		do	.041	69.73
Peas, split	do		do	.0236	36.13
Onions	England		do	.0200	99.50
Flaxseed	Hull		Bushel	1.88	83.92

Prices of certain textiles in United States and foreign countries

Article	Period	Unit	United States		Foreign		Foreign prices per cent of United States price
			Market	Price	Market	Price	
Wool [1]							[2] 82.61
Comparable grades	1923	Pound	United States	$1.172	England	$1.041	88.82
Do	1928	do	do	1.118	do	.952	85.65
Do	1928	do	do	1.039	do	.834	80.27
Do	1928	do	do	.979	do	.771	78.75
Wool tops and yarn [3]							[2] 59.02
Wool tops—							
Merino—							
70s average	January, 1929	Pound	New York	1.37½	England	.99	72.0
60s ordinary	do	do	do	1.35	do	.89	65.93
Crossbred, colonial carded—							
58s super comeback	do	do	do	1.30	do	.81	62.31
56s average	do	do	do	1.25	do	.72	57.60
50s average	do	do	do	1.15	do	.57½	50.00
44s average	do	do	do	.92½	do	.47½	51.35
Worsted yarns—							
2/50s	do	do	do	2.64	do	1.64	62.12
2/48s	do	do	do	2.02	do	1.27	62.87
2/40s	do	do	do	1.85	do	1.18	63.78
2/32s	do	do	do	1.77	do	1.10	62.15
2/36s	do	do	do	1.76	do	.99	56.25
2/20s	do	do	do	1.56	do	.80	51.28
2/24s	do	do	do	1.29	do	.64	49.61
Worsted fabrics [4]							[3] 67.97
Worsted serge—							
100a	June, 1923	Linear yard	New York	2.67	England	[5] 1.91	71.54
101a	do	do	do	3.20	do	[5] 2.26	70.62
102a	do	do	do	3.49	do	[5] 2.33	65.76
Cotton-filled gabardine—							
103a	do	do	do	3.12	do	[5] 2.06	66.03
104a	do	do	do	2.62	do	[5] 1.70	64.89
Gray cotton cloth sheeting and print cloth ranges	1927	Pound	do	[6] .3867	do	.3736	96.61
Silk [7]							[2] 54.58
6½ momme habutae	1924	Single-width yard.	New York	[8] 1.044	Japan	.428	41.00
Crêpe de Chine	1924	do	do	1.008	do	.687	68.15

[1] U. S. Tariff Commission, Summary of Tariff Information, 1929.
[2] Simple average of percentages in this column under this heading.
[3] Information obtained by U. S. Tariff Commission from trade.
[4] Source: U. S. Tariff Commission, Woven Fabrics of Wool, 1927.
[5] Approximate.
[6] Average construction of 36.7 inches, 62 by 62, 4.82 for United States; 36.6 inches, 65 by 62, 4.99 for foreign.
[7] U. S. Tariff Commission, Broad Silk Manufacture and the Tariff, 1926.
[8] Average taffeta line comparable to 6½ momme habutae.

It is impossible to make a precise average of the foregoing price data. The tables show in each case the percentage that the foreign is of the domestic price. A weighted average of these percentages can not be made because the amounts of the goods sold at the quoted prices are not known. Even if they were known, a weighted average might be misleading. Simple averages of the percentages can be given, but it should be borne in mind that such averages in this case can give only a very rough idea of the actual situation.

In the following table simple averages from the foregoing tables are combined. They show that prices in England, of the various classes of commodities shown, with exceptions, are lower than those in the United States. The foreign prices of some of the agricultural and nonmetallic mineral products are those of countries other than England but because of the absence of British customs duties upon them, it is believed their prices would not be much higher in England.

With respect to Germany, comparisons are here available only for chemical products and metals. These show an average in Germany 86.69 per cent of the average found for the United States.

Ratio of foreign prices to prices in the United States

Class of commodities	Per cent average foreign price of average price in the United States	
	England	Germany
Chemicals	90.74	78.24
Animal and vegetable oils and fats	91.44	
Ferrous metal products and coke	86.56	95.14
Nonferrous metals	93.66	
Nonmetallic minerals	53.13	
Wool	82.61	
Worsted fabrics [1]	67.97	
Gray cotton cloth sheeting	96.61	
Grains, cottonseed, cotton, lard, and bacon	123.13	
Other agricultural products	76.35	
Simple average	86.22	86.69

[1] Wool tops and yarns are omitted to avoid giving too great weight to wool and wool products.

Retail prices in different countries of certain food products are regularly reported and compared by the International Labor Office. The prices are for similar qualities and grades of the articles specified. The following table shows the prices in Philadelphia, London, and Berlin of some of the standard articles of food as reported by the International Labor Office in October, 1928:

Average retail prices of certain articles of food, October, 1928 [1]

[Cents per pound] [2]

Article	Philadelphia	London	Berlin
Bread, white	8.6	[3] 4.0	8.2
Flour, wheat	5.1	4.8	5.9
Butter, fresh	61.2	45.5	46.4
Margarine	28.8	14.1	20.1
Beef (home produce):			
Ribs	43.7	37.2	23.8
Thin flanks	37.6	15.4	23.8
Mutton (home produce):			
Leg	43.0	35.4	30.2
Breast		17.1	27.0
Potatoes	2.5	2.2	1.1
Sugar (white granulated)	6.6	6.2	6.5
Cheese	42.8	28.9	16.2
Eggs (not new laid or preserved) each	4.6	4.4	3.3
Rice	10.5	5.7	7.3

[1] International Labor Review, January, 1929, p. 105.
[2] Except eggs.
[3] This seems low, but about the same price is given in all the quotations.

The International Labor Office has constructed an index for the comparison of international food prices. This index is based upon a theoretical basket of provisions containing the above foods and some others. The various proportions of the several food products are slightly different in the several countries, being based upon the food-buying habits of the several nationalities as determined by study of family budgets. Assuming a basket of provisions to cost in September, 1928, 100 in Philadelphia, its cost in London was 74.5, and in Berlin was 80.[1]

With respect to the comparative prices of clothing, the following is quoted from a report by the United States Department of Commerce:

> Generally speaking the prices for clothes, shoes, and other necessities are lower in Germany than in the United States. Prices of ready-made suits range from $20 upwards, a good suit may be had at about $25 or $30. Ready-made suits are not in demand to such an extent in Germany as in the United States, as everybody who can possibly afford it, has his suits made to order. Such suits can be obtained according to the quality of the material from $35 upwards.[2]

The relative prices of clothing in the United States and Great Britain may be roughly inferred from the comparison of the prices of textiles shown in a preceding table. This table shows the English price of certain textiles in percentages of the United States price as follows:

Raw wool	82. 61
Wool tops and yarns	59. 02
Worsted fabrics	67. 97
Cotton cloth	96. 61

Very few studies have been made of the comparative prices of housing (rent) in the United States and foreign countries. Such comparisons are rendered difficult by the differences in types of dwellings and in standards of living here and abroad.

In 1927 and 1928, however, two reports were published which have made possible a fairly reliable comparison between wage earners' costs of housing in Germany and the United States. In 1927 a German association of merchants' employees made an investigation of the family budgets of 350 families of merchants' employees in various parts of Germany. The statistics obtained were based upon individual accounts kept by each family under the direction of a supervisor. The following table gives the average rentals shown by this investigation.

Annual rent for dwellings paid by store clerks in Germany, 1926 [a]

Income group	Average rent paid per family	Number families paying rent	Total rent	Number of rooms [b]	Annual rent per room [c]
Up to $714	$56. 78	38	$2, 157. 68	81	$26. 64
$714–$952	92. 55	97	8, 977. 30	269	33. 37
Over $952	121. 60	155	18, 847. 52	479	39. 35
Total		290	29, 982. 50	829	36. 17

Average number of rooms per family, excluding kitchen	2. 859
Average floor space per family, including kitchen (square feet)	734. 54
Average floor space per room, excluding kitchen (square feet)	228. 94

(Kitchen assumed to take up 80 square feet.)

[a] Deutschnationaler Handlungsgehilfen-Verband, Der Haushalt des Kaufmannsgehilfen, Hamburg, 1927, pp. 34–35.

[b] Number of rooms in addition to kitchen.

[c] The rent of the kitchen is included in that for the rooms.

[1] International Labour Review, Jan. 1929, p. 109.

[2] Department of Commerce, Bureau of Foreign and Domestic Commerce, Division of Regional Information, Special Circular No. 103, Living Costs for Americans in Germany, Nov. 10, 1927, p. 4. The prices quoted refer to the kind of clothes worn by travelers and business men.

For a comparison with the above figures of German rentals the results of an investigation made in the United States by the National Industrial Conference Board [3] in 1928 have been taken. This organization ascertained the rentals for prevailing types of housing for wage earners in a number of eastern and central cities. The following table shows the cities covered by the investigation, the type of dwelling, and the rent paid.

Representative average minimum rents per month for prevailing types of housing in 12 industrial cities [1]

Prevailing types of housing	Number of rooms	Average monthly rent	
		With bath	Without bath
Large cities:			
Boston, Mass.: Flat in 3-story building	[2] 5	$30	$20
Cleveland, Ohio: Flat in 2-story building	[2] 5	30	25
New York, N. Y.: Flat in multi-family dwelling	[2] 4	[2] 32	20
Philadelphia, Pa.: Single attached house	6	30	25
Medium-sized cities:			
Dayton, Ohio: Single detached or semidetached house	5	30	25
Reading, Pa.: Single attached house	6	30	25
Springfield, Mass.: Flat in 2-story or 3-story building	5	25	25
Syracuse, N. Y.: Flat in 2-story building	5–6	30	20
Small cities:			
Butler, Pa.: Single detached house	5–6	25	20
Lockport, N. Y.: Flat in 2-story building	5–6	30	20
Leominster, Mass.: Flat in 2-story building	[2] 5–6	20	----------
Marion, Ohio: Single detached house	5–6	25	20

[1] National Industrial Conference Board, The Cost of Living in Twelve Industrial Cities, New York, 1928, p. 30.
[2] Most prevalent type of housing for a family with children.

A comparison may be made between the German dwellings referred to above and a 5-room flat in American cities renting for $30 per month. The annual rent per room of such types of dwellings is $72 in American and $36 in German cities.

Reliable and comparable information about rent in England has not been found.

If the prices of dutiable imported articles are compared with the domestic prices of corresponding goods, the differences between the domestic and foreign price levels of such goods might appear to be much greater than indicated by the above statistics. It should be remembered, however, with respect to prices of articles imported over the tariff, that only such articles are regularly imported whose foreign prices are sufficiently lower than American prices to surmount the tariff rates.

The special goods and grades of goods that can be imported over the tariff could not properly represent the general foreign price level.

[3] The National Industrial Conference Board is a cooperative body composed of representatives of the principal national and State industrial associations. The National Association of Manufacturers of the United States is one of the members.

CHAPTER III

SOME DISADVANTAGES SUFFERED BY CERTAIN UNITED STATES INDUSTRIES

In the first chapter of this report it was shown that, in comparison with Great Britain, the higher wages paid in the United States were in general of no disadvantage, because of the higher American efficiency. Except for some statistics of German wages and labor productivity as given above, little information is available, for other countries, to show what advantages they may have over American industry because of their lower wages.

In the second chapter it was shown that the British price level is somewhat lower than the United States price level. The price level, however, is affected by factors other than the tariff and the varying price policies of different countries may influence their foreign trade more than the tariffs. The results of a currency and banking policy in the United States that would seek to maintain prices above the world line could hardly be neutralized by a high tariff. A banking and fiscal policy that maintains a high price level in the country places it at a disadvantage in international trade.

In addition to the competitive disadvantages suffered from a high price level, many domestic industries labor under natural disadvantages or are not adapted to the prevailing type of domestic labor.

In this chapter a number of commodities are analyzed or listed whose production suffers such disadvantages. It is not intended to imply that the differences in foreign and domestic wage levels may not constitute additional disadvantages borne by the domestic producers of these commodities.

The principal classes of natural disadvantages are insufficiency or poor quality of native materials or difficulty in their access. If the native raw materials are required for other purposes, there is in effect an insufficiency of supply. Unfavorable soil or climate are natural disadvantages for agricultural products. A necessary location of the domestic industry that requires high transportation cost to consuming markets is a natural disadvantage.

The following table lists a number of commodities produced in the United States under natural disadvantages (not including disadvantage of location). Often only a high tariff permits then to meet foreign competition in domestic markets.

Some dutiable commodities whose production in the United States is subject to natural or special disadvantages (not including bad location)

Paragraph and article	Equivalent ad valorem tariff rate		Disadvantage
	Act of 1922	Act of 1930 [1]	
16. Calcium acetate	Free.	28.46	Calcium acetate is a joint product in the manufacture of natural methanol and acetone. The demand for the latter products has decreased. Therefore it has become less profitable to produce calcium acetate.
19. Casein	19.47	42.83	The raw material of casein is skim milk. In the United States skim milk is used for other purposes, such as hog feeding, or dried skim milk.
20. Whiting	25.00	175.76	There is little or no high-grade true chalk in the United States suitable for whiting manufacture.
41. Glue	37.25 29.38	48.00 35.72	The large production of bone glue in this country has forced the domestic price of bones higher than the price in England. The domestic supply of bones is strictly limited.
45. Bromine	34.62	34.62	Bromine is produced in the United States by special extraction from brine. In Germany it is a by-product from the extraction of potash from the Stassfort deposits.
49. Magnesium chloride anhydrous.	136.68	136.68	In Germany magnesium chloride is a by-product from the production of potassium chloride. In the United States it must be obtained by special process.
53. Olive oil	40.54 35.59	51.35 35.59	There is a shortage of domestic raw material since the olives produced (except culls) can be used more advantageously for other purposes.
54. Palm kernel oil	Free.	12.32	No raw material grown in the United States.
54. Coconut oil	18.33	18.33	Raw material not produced in continental United States.
54. Soybean oil	40.52	56.73	There is a shortage of domestic raw material because the soybeans produced are more advantageously used for other purposes.
67. Barytes ore, crude	115.64	115.64	The veins of barytes ore in Germany are thicker and richer than in this country. Domestic barytes has to be hauled from Missouri, Georgia, and Tennessee to eastern points.
83. Potato starch	49.45	70.64	Some foreign countries have large supplies of cheap potatoes, the raw material. There is usually a good market for potatoes (except culls) in the United States for other purposes.
201. Common brick	Free.	7.65	The clay in the vicinity of New York, where brick are imported, is of a quality requiring a particularly expensive process of manufacture.
205. Portland cement	Free.	16.86	In Belgium, Portland cement is made out of soft chalk easily obtained. In the United States, the raw material is more difficult to mine and harder to grind.
206. Pumice	21.75 96.84	21.75 132.05	There is apparently very little true pumice in the United States and what has been exploited is in California and Oregon.
207. China clay	23.93	23.93	The china clay mined in the United States is different from the clay imported from England, and is unsuitable for some purposes for which the latter is used.
207. Fluorspar	58.12	84.82	Domestic supplies of acid grade are not adequate to meet domestic demands.
213. Graphite	22.84	29.51	Graphite deposits in Ceylon are of much higher grade than the domestic deposits.
302. Aluminum	24.13	19.29	Because of abundant water power aluminum can be produced more cheaply in Canada than in the United States.
302. Manganese ore	88.76	88.76	Domestic deposits of high-grade ore are small.
302. Tungsten ore	191.19	212.44	Domestic deposits are of low grade.
325. Anvils	23.06	42.57	Swedish steel is more adapted to making inexpensive cast anvils than American steel of ordinary grades.
386. Quicksilver	19.25	19.25	Spanish ore is about ten times as rich as United States ore.
377. Bismuth	7.50	7.50	Such production as there is in the United States is a by-product of lead refining. The United States lacks other resources.
402. Maple, birch, and beech flooring.	Free.	8.00	Domestic stands of maple, birch, and beech timber have been much depleted.
401. Lumber	Free.	3.89	Domestic supplies of timber have been so depleted as to increase cost of production.
405. Plywood	33.33	50.00	Do.
502. Blackstrap molasses	4.53	4.98	Natural conditions of production are much more favorable in Cuba than in the United States.
501. Sugar	72.64	82.38	Natural conditions in the United States are less adapted to production than they are in Cuba and Hawaii.
504. Sugarcane	28.57	71.43	Do.

[1] Calculated on the basis of 1928 imports.

Some dutiable commodities whose production in the United States is subject to natural or special disadvantages (not including bad location)—Continued

Paragraph and article	Equivalent ad valorem tariff rate		Disadvantage
	Act of 1922	Act of 1930	
601. Cigar wrapper tobacco	97.14	105.23	"The producers of domestic shade-grown leaf are under large annual expense for cloth, posts, and wire, the equipment necessary to simulate artificially the naturally favorable climatic conditions of the East Indies." (Summary of Tariff Information.)
701. Feeder cattle	18.83 23.20	38.84	Because of extensive and low-valued ranges and pasture, Canada can produce feeder cattle more cheaply than the United States.
710. Switzerland cheese	28.00	36.89	It is claimed that the flavor of Switzerland cheese is caused by grass feeding, quality of water, and other conditions peculiar to Switzerland.
717. Fish	11.96	12.23	Several types of fish have been depleted in domestic waters, while foreign supplies are abundant.
741. Dried dates	20.26	20.39	Area suitable for dates in the United States is restricted, and crop can be sold at good prices semi-fresh.
742. Grapes	10.86	10.86	Foreign competition is in late winter when the domestic crop is gone. South American grapes enter at this time.
747. Fresh pineapples	14.12	25.10	Disease and unfavorable soil and climate cause high cost of production in Florida. Fresh pineapples can not be shipped from Hawaii because of distance.
760. Walnuts, shelled	43.67	54.59	Users claim the domestic walnuts are not so suitable for confectionery trade as are the foreign.
763. Crimson clover seed	10.60	21.19	The only domestic region producing crimson clover seed on a commercial scale is Tennessee, but there the yield has been curtailed by crown and stem rot.
768. Canned mushrooms	45.00	70.31	Mushrooms for canning have to be produced in hothouses in the United States. In France they are produced at small cost in natural caves.
768. Dried mushrooms	45.00	57.90	Dried mushrooms are not produced in the United States.
769. Green peas	20.08	60.25	Because of less favorable climate the winter growing of peas in Florida and California is more expensive than in Mexico, Cuba, and Bermuda.
772. Fresh tomatoes	15.71	94.28	Storms and frosts frequently destroy winter tomato crop in Florida, while these unfavorable conditions are generally absent from Cuba, Bermuda, and Mexico.
772. Canned tomatoes	15.00	50.00	The variety of tomato imported can not be grown commercially in eastern United States, because of climate, soil, etc.
774. Fresh winter vegetables	23.78	79.65	Domestic natural disadvantages given under "772, fresh tomatoes."
783. Long staple cotton	Free.	24.00	Climate of most of cotton-growing region of United States unadapted to production of long-staple cotton.
1008. Jute burlap	7.76	7.76	Bulky raw material can be more advantageously worked up at source.
1101. Raw wool	43.40	47.70	Present scarcity of cheap ranges in United States is a natural disadvantage compared with abundant pastures in Argentina and Australia.
1401. Printing paper	15.35	15.35	Domestic natural resources impaired by depletion of forests.
1407. Fine paper	29.25	29.25	Domestic natural resources impaired by depletion of forests.
1511. Cork manufactures	26.74	47.52	Because of the bulk of cork it is more economically manufactured near the source.
1530. Cattle hides	Free.	10.00	The production of cattle hides in the United States is limited by the number of cattle slaughtered, which will not be increased by the tariff.

The following two tables show the adverse freight differentials suffered by certain domestic industries. In a certain number of cases the customs duty barely compensates the permanent natural disadvantage of the domestic industry caused by its unavoidably bad location. Many United States industries suffer from adverse transportation differentials compared with foreign competing industries. In many of them, however, the freight disadvantage is but a small proportion of the value and is not relatively important, although in the aggregate it makes an immense sum.

Freight rates on certain domestic and foreign commodities to important domestic markets

Paragraph	Commodity	Year for which freight rate obtained	Unit of quantity	Important point of domestic production	Important domestic market	Freight from domestic point of production	Freight from foreign country	Foreign country	Source of freight rates
204	Crude magnesite	1929	100 pounds	Washington	New York	$0.99	$0.27	Greece	Shipping agencies.
205	Portland cement	1929	Barrel	Birmingham, Ala	Charleston, S. C.	.80	.54	Belgium	Do.
207	China clay	1930	Short ton	Georgia	Philadelphia	5.40	3.10	England	Do.
207	Clay, artificially activated	1929	Ton	California	New York	6.60	3.50	Europe	Hearing before Senate Committee on Finance, 1929. Schedule 2, pp. 167–170.
207	Fuller's earth	1929	100 pounds	Atlanta, Ga	do	.42	.16	London	U. S. Tariff Commission Summary of Tariff Information, 1929, p. 456.
207	Fluorspar	1925	Short ton	Kentucky	Philadelphia	7.50	3.04	England	U. S. Tariff Commission Summary of Tariff Information, 1929, p. 458.
207	Glass sand	1929	do	Eastern States	San Francisco	6.00	3.00	Belgium	Hearings before Ways and Means Committee, 1929, pp. 9377–9378.
213	Flake graphite	1929	do	Alabama	New York	16.00	7.12	Ceylon	Hearings before Senate Committee on Finance, Schedule 2, p. 344.
234	Granite, hewn, dressed	1925	100 pounds	St. Cloud, Minn	do	.79	.50	Germany	U. S. Tariff Commission, Granite, 1929, pp. 32–33.
235	Slates	1929	Square foot	Pennsylvania, Maine, and Vermont.	Pacific coast	.30	.02	Spain	Hearings before Senate Committee on Finance, Schedule 2, p. 744.
							.04	Italy	
301	Iron in pigs	1929	100 pounds	Pittsburgh	New York	.24	.13	London	Shipping agencies.
302	Manganese ore	1929	do	Butte, Mont	do	.63	.27	Poti	Do.
304	Steel ingots, billets	1929	do	Pittsburgh	do	.25	.16	London	Do.
327	Cast-iron pipe	1928	Short ton	Burlington, N. J.	Boston	5.50	3.40	France	Shipping agencies and U. S. Tariff Commission Supplement to Tariff Information, 1929, p. 191.
				Birmingham, Ala	El Paso	15.20			
707	Cream	1925	40 quarts	Reedsburg, Wis	Boston	2.12	.75	Quebec	U. S. Tariff Commission, Milk and Cream, 1925, p. 26.
734	Corn	1926–27	Bushel	Central States	San Francisco	.38	.17	Argentina	U. S. Tariff Commission, Summary Tariff Information, 1929, p. 1186.
737	Cherries in brine	1929	100 pounds	Pacific coast	New York	1.05	.21	Italy	Shipping agencies.
743	Lemons	1929	Box 74 pounds	California	do	1.39	.54	do	Hearings before Ways and Means Committee, p. 4543.
744	Olives in brine	1929	100 pounds	do	do	1.05	.38	do	Shipping agencies.
760	Walnuts, unshelled	1929	do	do	do	1.50	.33	Spain	Do.
762	Flaxseed	1925–26	Bushel	North Central States	do	.30	.14	Argentina	U. S. Tariff Commission, Supplement to Tariff Information, 1930, p. 325.
765	Dried beans	1931	100 pounds	California	do	1.28	.27	France	Shipping agencies.
770	Onions (sweet)	1929	do	do	do	1.51	.30	Spain	Do.
774	Lettuce	1929	do	do	do	1.75	.55	Bermuda	Do.
774	Celery	1929	do	do	do	1.75	.63	do	Do.
774	Peppers	1929	do	do	do	1.75	.88	Cuba	Do.

Duties under the tariff act of 1930 and adverse freight differential of certain domestic commodities to important domestic markets

Par.	Commodity	Unit of quantity	Duty per unit	Adverse freight differential of domestic commodity
204	Crude magnesite	100 pounds	$0.47	$0.72
205	Portland cement	Barrel	.23	.26
207	China clay	Ton	2.50	2.30
207	Clay, artificially activated	do	2.00	3.10
207	Fullers earth	do	1.50	5.20
207	Fluorspar	do	5.60 8.40	4.46
207	Glass sand	do	2.00	3.00
213	Flake graphite	do	33.00	8.88
234	Granite, hewn, dressed, etc	100 pounds	2.52	.29
235	Slates	Square foot	.04	.25
301	Iron in pigs	Ton	1.12	2.20
302	Manganese ore	100 pounds	1.00	.36
304	Steel ingots, billets	do	.41	.09
327	Cast-iron pipe	Short ton	26.00	1.70–11.80
707	Cream	Gallon	.56	.14
734	Corn	Bushel	.25	.21
737	Cherries in brine	100 pounds	2.00	.84
743	Lemons	do	2.50	1.00
744	Olives in brine	do	3.33	.67
760	Walnuts, unshelled	do	5.00	1.17
762	Flaxseed	Bushel	.65	.16
765	Dried beans	100 pounds	3.00	1.00
770	Onions	do	2.50	1.20
774	Lettuce	do	2.00	1.20
774	Celery	do	2.00	1.12
774	Peppers	do	2.40	.87

The following table lists some dutiable articles whose production requires an unusual amount of hand labor. Industries making such articles experience difficulty in the United States. The usual American methods of mass mechanized production make labor very efficient, and it commands high wages. The industries which can not use mass-production methods must, nevertheless, pay the prevailing rates of wages. In competing countries the wage rates are low, mainly because American mass methods are not used. Most United States manufacturing industries using a large proportion of handwork can not subsist without the aid of customs duties.

Some dutiable articles the production of which requires an unusual amount of hand labor

Paragraph and article	Equivalent ad valorem rate	
	Act of 1922	Bill of 1930 [1]
205. Statues, etc., of plaster of Paris	35.00	60.00 35.00
212. Decorated chinaware	70.00	81.06
218. Scientific and experimental glassware, n. e. s	65.00	85.00
218. Blown glass perfume bottles	55.00	75.00
228. Scientific measuring instruments	45.00	60.00
230. Stained or painted windows	50.00	60.00
351. Metallic pens (certain kinds)	31.46	43.26
354. Pocket knives	98.77	102.60
358. Razors (not safety)	132.01	117.01
359. Surgical instruments	42.35	49.70
368. Watches	61.22	91.83
383. Gold leaf	71.49	71.49
908. Tapestries	45.00	55.00
1016. Handkerchiefs, hemmed	45.00	52.91
1116. Oriental rugs	55.00	53.48
1504. Sewed straw hats	88.00 60.00	159.20 143.97
1513. Toys	70.00	70.00
1513. Dolls	60.00	164.88
1518. Artificial flowers, etc	60.00	60.00
1527. Jewelry	80.00	80.00
1529. Handmade lace	90.00	90.00
1529. Embroideries	75.00	90.00
1541. Violins	66.45	74.31
1552. Smoking pipes	60.00	103.51

[1] Computed on basis of 1928 imports.

Although American industry may be in general very efficient, there are many concerns and perhaps industries that are relatively inefficient. This is shown by the great differences in unit costs of production of different establishments as appears in cost of production investigations. The following table shows the highest and lowest costs of different concerns in the production of different articles. The table is a summary of tables appearing later.

Maximum and minimum costs of certain commodities shown by cost investigations

Commodity	Basis on which ranged	Unit	Highest cost	Lowest cost
Iron in pigs	States	Ton	$25.17	$19.39
Plate glass	Companies	Square foot	.59	.39
Casein	do	Pound	.082	.025
Logs	do	1,000 feet	24.24	11.82
Coal	District	Ton	3.41	1.76
Copper	Company	Pound	.36	.13
Sugar	Factory	Ton	104.56	68.34
Lumber	Company	1,000 feet	57.47	25.28
Newsprint paper	Mill	Ton	40.80	26.51
Book paper	do	do	95.57	57.38
Lithopone	Plant	Pound	.075	.053
Carpeting	Company	Square yard	4.02	1.16
Onions	Farms	Pound	.06	.007
Peanuts	do	do	.14	.04
Flaxseed	Farm	Bushel	7.00	.90
Butterfat	do	Pound	1.67	.24

The relative inefficiency of certain industries is sometimes caused by the fact that many small, badly managed, poorly located units are allowed to struggle on. Some of them go under but new inefficient concerns appear to take the place of those which have failed.

On the other hand, when an industry has been organized into a few large units, new causes of inefficiency may appear. The absorption of ineffective plants may have caused overcapitalization. Sometimes the stockholders are numerous and widely scattered and can not properly control the business, which falls into the hands of unscrupulous speculators or incapable promoters.

The question frequently arises to what extent the protective tariff should be used to bolster up inefficient producers. The question can not be discussed here, but it would seem that a condition of receiving a tariff should be that the industry concerned be organized and managed according to the principles of efficient business.

Iron in pigs, foundry and malleable iron: Varying costs of production, 1924 [1]

District	Cost of production per ton	District	Cost of production per ton
Alabama	$19.39	Buffalo	$22.17
Western	21.50	Eastern	25.17

[1] U. S. Tariff Commission Iron in Pigs, Report to the President, Washington, 1927, p. 15.

Cast polished plate glass: Varying costs of production, United States, 1925 [1]

Company	Cost per square foot	Company	Cost per square foot
	Cents		*Cents*
1	38.98	8	46.80
2	39.04	9	47.42
3	39.56	10	52.79
4	40.19	11	55.34
5	41.11	12	55.84
6	42.82	13	58.58
7	46.29		

[1] U. S. Tarriff Commission, Cast Polished Plate Glass, Report to the President, 1929, p. 49.

Conversion of skim milk into casein: Varying costs of production, United States, 1922 [1]

Company	Cost per pound	Company	Cost per pound
	Cents		*Cents*
1	2.49	10	5.57
2	3.07	11	5.77
3	3.16	12	6.05
4	3.41	13	6.57
5	3.85	14	6.75
6	4.78	15	7.54
7	5.29	16	7.97
8	5.30	17	8.23
9	5.55		

[1] U. S. Tariff Commission, Casein, Report to the President, Washington, 1929, p. 10.

Logs: Domestic logging costs calendar year 1923 [1]

Company number	Total operating cost in boom, including interest	Company number	Total operating cost in boom, including interest
1	$11.82	24	$17.13
2	12.23	25	17.24
3	12.98	26	17.28
4	13.36	27	17.41
5	13.39	28	17.82
6	13.82	29	17.90
7	14.10	30	18.33
8	14.13	31	18.41
9	14.48	32	18.61
10	14.56	33	19.21
11	15.06	34	19.53
12	15.51	35	19.78
13	15.57	36	19.82
14	15.90	37	20.04
15	16.10	38	21.42
16	16.25	39	21.83
17	16.27	40	22.30
18	16.27	41	22.71
19	16.28	42	23.97
20	16.30	43	24.24
21	16.40		
22	16.62	Weighted average	16.63
23	17.11		

[1] U. S. Tariff Commission, Logs, Report to the President, Washington, 1929, p. 15.

Cost per pound of lithopone during 1919 by companies [1]

Plant No.	Total cost	Plant No.	Total cost
1	$0.0529	8	$0.0653
2	.0536	9	.0697
3	.0574	10	.0744
4	.0586	11	.0751
5	.0609		
6	.0635	Weighted average	.0602
7	.0643		

[1] U. S. Tariff Commission, Barytes, Barium Chemicals and Lithopone (T. I. S., A–4), Washington, 1921, p. 85.

NOTE.—The variation in costs between manufacturers is not in accordance with quantity production as might be expected. There are large producers * * * with high costs and there are small producers with low costs.

Factory cost of carpetings per square yard, 1919 [1]

[Goods of the same kind and quality]

Company	Wool velvet (roll goods)	Axminster (roll goods)	Tapestry (seamless)	Wool Wilton (seamed)
1	$4.0177			$4.0931
2	2.4531	$4.2042	$1.5320	3.8283
3	1.6909	2.0506	1.3943	4.4001
4	1.6456	2.0722	2.3040	
5	2.4634	2.1047	1.9247	3.8499
6	2.3449	2.2333	1.3962	5.0450
7			1.5998	
8			1.3920	3.9665
9	2.1497		2.0642	
10	2.3715			4.1530
11	1.1637	1.8214		

[1] U. S. Tariff Commission, Carpets and Rugs of Wool (T. I. S., K–6), pp. 91–95.

Cost of producing coal in 13 districts in Ohio, Indiana, and Michigan, 1918 [1]

District	Production	Costs per ton
	Tons	
Ohio:		
No. 1	805,517	$2.48
No. 2	828,935	2.77
No. 3	8,321,282	1.93
No. 3a	275,809	2.31
No. 4	2,143,230	2.05
No. 5	476,862	2.21
No. 6	3,872,495	2.31
No. 7	807,894	2.63
No. 8	18,988,643	1.76
No. 9	5,171,527	1.79
Indiana:		
No. 1	25,179,012	1.86
Brazil-Block	653,739	2.57
State of Michigan	1,417,387	3.41

[1] Federal Trade Commission, Cost Reports, Coal No. 5, Washington, 1920, p. 177.

Costs of producing copper in 1918 [1]

Number of establishments	Pounds produced	Per cent of total	Average cost per pound
			Cents
6	424,340,257	33.84	12.630
7	395,672,390	31.56	16.284
8	169,578,109	13.53	18.078
5	36,871,193	2.94	20.477
5	91,812,263	7.32	21.605
7	90,111,068	7.19	22.090
8	33,955,962	2.71	26.273
7	11,426,343	.91	35.989
	1,253,767,585	100.00	16.700

[1] U. S. Federal Trade Commission, Cost Reports, Copper, Washington, 1919, p. 19.

Sugar: Percentages of 1922 crop in each region of raw cane sugar production, arranged by cost groups [1]

[Weighted averages]

Costs in cents per pound f. o. b. mill	Percentage of raw cane sugar crop produced at each cost shown in column 1 in each region of production			
	Cuba	Hawaii	Porto Rico	Louisiana [2] 1922–23 crop
At or under 2 cents	36.4742			
2–2¼ cents	23.5140			
2¼–2½ cents	26.7428			
2½–2¾ cents	5.9645			
2¾–3 cents	.7592		3.48	
Total at or under 3 cents	93.4547		3.48	
3–3¼ cents	1.7060	13.896	3.13	
3¼–3½ cents	1.9925	15.466	27.77	
3½–3¾ cents	2.0117	15.179	21.61	0.3966
3¾–4 cents	.8351	5.874	9.23	13.8230
Total at or under 4 cents	100.0000	50.415	65.22	14.2196
4–4¼ cents		16.923	4.43	2.5273
4¼–4½ cents		15.001	4.58	29.6647
4½–4¾ cents		2.938	2.17	9.9432
4¾–5 cents		6.189	2.74	8.3452
Total at or under 5 cents		91.466	79.14	64.7000
5–5¼ cents		2.507	1.94	9.4786
5¼–5½ cents		.999	14.70	15.4783
5½–5¾ cents		2.642	0.00	4.8194
5¾–6 cents		0.000	0.00	3.1943
Total at or under 6 cents		97.614	95.78	97.6706
Over 6 cents		2.386	4.22	2.3294

[1] U. S. Tariff Commission, A Preliminary Statement of Cost Data Secured in Pending Sugar Investigation, the subject of a public hearing, Jan. 15, 1924.
[2] Covering 33 mills only which produced raws as main product.

Cost of producing sugar [1]

Number designating factory	Output	Cost per ton [2]
	Tons	
1	10,205	$68.34
2	10,780	71.19
3	48,936	85.62
4	6,335	87.70
5	80,883	92.71
6	23,129	97.51
7	11,114	99.83
8	11,318	103.11
9	29,344	103.12
10	13,501	104.56
Average by factories		91.37
Average by tonnage		92.36

[1] U. S. Tariff Commission, Costs of Production in the Sugar Industry, Washington, 1919, p. 9.
[2] Receipts from by-products deducted.

Total costs of individual mills in eastern Ontario of producing pine, spruce, and hemlock lumber [1]

Company	Cost per 1,000 feet	Company	Cost per 1,000 feet
1	$25.28	5	$39.76
2	37.49	6	54.25
3	47.93	7	57.47
4	31.22	8	33.00

[1] U. S. Tariff Commission, Logs, Timber, Lumber, and Other Products (Survey, Fl.–37), Washington, 1922, pp. 26–31.

NOTE.—There are probably some differences in quality of lumber.

Cost of producing newsprint paper, 1913 [1]

Number of mills	Tons produced	Per cent of total	Average cost per ton
2	169,548	18.0	$26.51
3	82,773	8.7	27.57
1	75,290	8.0	30.97
8	214,678	22.7	34.66
14	361,602	38.3	36.93
2	40,472	4.3	40.80
30	944,363	100.0	33.42

[1] U. S. Federal Trade Commission. Newsprint Paper Industry, Washington, 1917, p. 91.

Cost of producing book paper, 1916 [1]

Number of mills	Tons produced	Per cent of total	Average cost per ton
6	210,639	27.27	$57.38
5	136,463	17.66	63.92
1	35,838	4.64	67.45
8	128,040	16.57	72.58
9	112,919	14.62	77.88
4	92,380	11.96	81.77
4	33,732	4.37	87.62
2	22,521	2.91	95.57
39	772,532	100.00	69.87

[1] U. S. Federal Trade Commission, The Book-Paper Industry, Washington, 1917, p. 67.

Onions: Varying costs of production, United States, 1926 [1]

Number of farms	Cost per pound	Number of farms	Cost per pound
	Cents		*Cents*
5	(2)	8	3.25–3.49
31	0.75– .99	6	3.50–3.74
61	1.00–1.24	4	3.75–3.99
47	1.25–1.49	3	4.00–4.24
61	1.50–1.74	2	4.25–4.49
46	1.75–1.99	2	4.50–4.74
33	2.00–2.24	1	5.25–5.49
25	2.25–2.49	4	5.50–5.74
18	2.50–2.74	5	5.75–5.99
21	2.75–2.99	16	Over 6.00
12	3.00–3.24		

[1] U. S. Tariff Commission, Onions, Report to the President, Washington, 1929, p. 69
[2] Less than 0.75 cents.

Virginia peanuts: Varying costs of production, Virginia and North Carolina, 1925 [1]

Number of farms having specified cost	Average cost of production per pound	Number of farms having specified cost	Average cost of production per pound
	Cents		*Cents*
1	14.2	91	5.5
2	12.5	101	5.4
6	11.5	110	5.3
4	11.3	125	5.1
12	7.2	135	4.9
19	7.0	141	4.8
19	6.9	154	4.7
29	6.5	528	4.6
40	6.3	394	4.5
49	6.1	1,294	4.4
63	5.9	232	4.3
150	5.7		

[1] U. S. Tariff Commission, Peanuts, Report to the President, Washington, 1929, p. 83.

Flaxseed: Varying costs of production in the United States, 1926 [1]

Cost per bushel:	Farms
Less than $0.90	2
$0.90 and less than $1.20	15
$1.20 and less than $1.50	29
$1.50 and less than $1.80	41
$1.80 and less than $2.10	44
$2.10 and less than $2.40	32
$2.40 and less than $3	32
$3 and less than $4	37
$4 and less than $5	21
$5 and less than $6	20
$6 and less than $7	17
$7 and over	34
Total	324

The Tariff Commission investigation of butter covered 691 farms. The farm cost in 1923–24 of producing butterfat ranged in a rather regular curve from $0.24 to $1.67 per pound.[2]

[1] U. S. Tariff Commission, Flaxseed, Report to the President, Washington, 1929, p. 52.
[2] U. S. Tariff Commission, Butter. Report to the President, Washington, 1929, pp. 102–103.

CHAPTER IV

DUTIABLE ARTICLES ON AN EXPORT BASIS

A large proportion of the articles dutiable under United States tariffs are on an export basis. The term "on an export basis" is somewhat indefinite. It will be used here to mean exported in greater amounts than imported. The simultaneous importation and exportation of any category of commodities may have several explanations of which the following are the principal ones:

1. A category or tariff classification of goods usually contains many types and grades. Some of these may be imported and some exported. On some qualities or grades of the classification the foreign competition in the domestic market may be severe, resulting in large imports, while on other qualities or grades there may be little or no foreign competition in the domestic market, the United States exporting to many parts of the world. In such cases the tariff may have little or no effect on the domestic prices of the grades exported if there is active domestic competition.

2. Many heavy commodities, such as lumber, may be exported from some parts of the country and imported into other parts. This accounts for the fact that a good many tariff categories simultaneously show importation and exportation. With respect to such commodities, it may be said that the transportation rates which explain the above phenomenon usually act as an adequate protective agency for large parts of the United States market. (Most of the commodities listed in the tables in this chapter are exported to many parts of the world.)

In order to obtain some statistical data on the above matters two tables have been prepared which follow. The first table shows a number of dutiable articles whose imports are insignificant compared with domestic production and exports. These exports go to numerous world markets. They show that upon many types and grades of goods in each classification tabulated, the United States can produce for lower prices than competing nations. On such types and grades of goods the tariff is not effective; it is nominal. Of course, there are some types of goods even in these classifications that are imported over the tariff.

It is necessary to emphasize that the classifications or categories covering production, imports, and exports in the following two tables are not always strictly comparable. They have been used in the comparison because more exact statistics are not available. The following two tables can not, therefore, be used as a guide in determining individual tariff rates. Many considerations should enter into the determination of any tariff rate. The following tables may be used only as a rough measure to show the extent of tariff groups some of whose products are on an export basis. In many of the categories given in the following tables there are certain grades, qualities, or forms of the articles enumerated which would not be manufactured in this country without tariff protection.

Certain dutiable commodities whose domestic production and exports greatly exceed imports [1]

Paragraph act of 1930	Commodity	Production				Imports				Exports		Principal countries to which exported
		Year	Unit	Quantity	Value	Year	Quantity	Value	Equivalent advalorem rate, act of 1930 [2]	Quantity	Value	
									Per cent			
1	Oleic acid or red oil	1928	Pound	64,426,377		1928	46,282	$5,900	20.00	6,253,570	$547,437	Belgium, Canada, France.
3	Acetone	1928	do	24,000,000		1928	37,898	4,650	20.00	4,959,104	426,656	Canada, Cuba, Mexico.
1642	Calcium arsenate	1927	do	18,715,563		1928	1,132	233		1,178,702	67,151	Japan, United Kingdom, the Netherlands, Italy.
6	Aluminum sulphate	1926	do	661,680,000	$8,066,990	1928	1,116,568	11,430	2.71	45,426,137	552,342	Canada, Cuba, Peru.
13	Blacking, cleaning, polishing preparations.	1927			59,242,982	1928	379,296	131,589	37.57 / 25.00	[3] 10,185,435	2,085,245	Cuba, Canada, Mexico, Europe.
32	Vulcanized fiber	1927	Pound		23,817,616	1928	12,452	2,175	30.00	5,523,712	1,455,175	Canada, France, United Kingdom.
54	Cottonseed oil	1928	do	1,476,609,000	132,372,000	1928	530	71	22.39	51,702,246	4,656,725	Canada, Cuba, Mexico, Norway.
72	Red lead	1927	do	78,146,000	6,980,042	1928	24,675	1,510	44.94	4,167,918	364,995	Canada, Mexico, Panama, Europe.
72	White lead	1927	do	315,390,000	34,537,385	1928	166,236	15,889	26.16	12,952,743	952,316	Argentina, Netherlands, United Kingdom.
81	Sodium chromate and dichromate.	1927	do	62,924,000	3,780,435	1928	1,752	287	10.68	8,692,088	560,777	Canada, Japan, United Kingdom.
201a	Fire brick other than chrome and manganese.	1927			48,810,243	1928		90,593	25.00		2,270,142	Canada, Cuba, Mexico, Europe.
309	Galvanized sheets, plates, etc.	1927	Pound	2,936,116,258		1928	2,813,525	60,457	23.91	340,989,706	14,663,965	Americas and Europe.
316	Insulated wire and cable	1925			210,617,310	1928		30,049	35.00		4,816,608	Latin America, United Kingdom.
319	Anchors and forgings		Pound			1928		80,993	25.91	26,142,696	2,307,723	Canada, France, Italy.
320	Electric storage batteries and parts.	1925			110,211,783	1928		18,527	40.00		3,400,948	Canada, Australia, Europe.
330	Bolts, nuts, washers, etc.	1925	Pound		100,182,403	1928		25,966	18.60	34,973,511	2,846,540	General.
1550	Fountain pens	1927			17,334,398	1927		3,146			1,846,196	Canada, China, United Kingdom.
366	Pistols and revolvers	1927	Number	229,058	2,893,952	1928	15,504	41,565	130.19	73,985	1,283,328	Latin America, Europe.
369	Motor cycles and parts	1927	do		11,384,805	1928		20,993	29.94	18,934	4,402,576	Canada, Australia, Africa, Germany.
370	Motorboats	1925	do	1,744	12,380,944	1928		42,111	30.00		755,052	Canada, Latin America, United Kingdom.
372	Locomotives	1925	do	1,429	50,362,806	1928	2	4,254	15.00		3,181,994	Americas, China, South Africa, Europe.
372	Cash registers	1925			42,326,496	1928		1,672	25.00		8,147,384	Canada, Germany, United Kingdom, South America.
372	Lawn mowers	1925	Number		8,046,961	1928		605	30.00	117,895	948,261	Canada, Argentina, Australia, Europe.

372	Internal-combustion engines	1925	do	547,865	117,893,644	1928	43	59,547	27.50		12,300,410	Latin America, Canada, Japan.
381	Copper, brass, bronze, and manufactures.	1925	Pound	1,102,965,977	212,594,584	1928	18,120	4,729	18.35	89,485,053	15,231,000	Canada, United Kingdom.
96	Nitroglycerin and dynamite	1925	do	361,261,760		1928	3,750	930	5.04	15,501,092	2,171,461	Americas.
394	Zinc metal	1927	do	1,270,600,000		1928	305,350	17,274	30.97	63,205,479	4,347,550	Canada, Japan, Argentina, Germany.
407	Packing boxes and box shooks.	1925	Number		152,294,579	1928	985,580	59,864	15.00		3,780,926	Americas, Australia, China.
503	Dextrose, dextrose sirup	1927	Pound	1,805,751,805	47,970,817	1928	2,003	177	18.92	131,135,357	4,575,140	General.
506	Chewing gum	1927	do		61,722,467	1928			40.00	3,027,396	1,352,474	United Kingdom, Canada, Italy, Mexico.
716	Honey	1927	do	200,000,000		1928	96,544	24,713	11.76	10,793,598	970,941	Europe.
722	Barley	1928	Bushel	356,868,000	197,128,000	1928	7,347	7,531	19.51	54,376,724	44,836,641	United Kingdom, Canada, Germany.
726	Oatmeal and oat products	1925	Pound	672,805,860	34,449,000	1928	521,383	51,147	8.16	84,074,152	4,293,478	United Kingdom and Netherlands.
728	Rye	1928	Bushel	41,766,000	36,067,000	1928	1,523	1,668	13.70	14,499,404	17,377,574	Canada, Northern Europe.
732	Cereal breakfast foods, n. s. p. f.	1925	Pound		8,805,008	1928	68,339	8,531	20.00	6,219,272	664,768	General.
734	Apples, dried, etc	1927	do	26,552,000		1928	6,212	289	42.99	35,150,527	4,146,135	United Kingdom, Canada, Panama, China.
735	Apricots, green, ripe, dried, or in brine.	1927	do	368,000,000	10,488,000	1928	61,978	5,140	6.03	23,843,482	3,546,562	Europe.
745	Peaches, dried	1927	do	32,000,000		1928	16,416	1,494	21.98	9,810,263	963,419	Europe, Canada, Argentina.
763	Timothy seed	1928	do	65,600,000		1928	1,708	153	22.22	12,220,398	659,108	Canada, Germany, United Kingdom, New Zealand.
777	Cocoa butter	1927	do	22,769,336	8,555,497	1928	21,280	7,319	25.00	2,433,106	778,094	Americas.
904	Tire fabrics	1925	Square yard	242,126,459	105,625,894	1928	1,808	1,174	25.00	6,410,495	2,636,751	Canada, Australia, United Kingdom.
907	Oilcloths	1927	do	105,284,270	18,762,924	1928	3,467	1,322	30.00	10,764,644	2,343,933	General.
1203	Thrown silk	1925	Pound	37,264,544		1928	566	3,903	20.00	174,539	950,639	Do.
1204	Sewing silk	1927	do	1,382,179	12,242,259	1928	520	3,334	40.00	78,342	621,618	Do.
1409	Blotting paper	1927	do	26,180,000	2,700,322	1928	5,064	1,445	30.00	3,921,000	445,510	Canada and Argentina.
384	Locks and latches	1923	Dozen		27,755,217	1928	50,980	41,401	76.10	411,131	1,306,318	General.

[1] Statistics obtained from U. S. Tariff Commission, Summary of Tariff Information, 1929.
[2] From U. S. Tariff Commission, Comparison of Rates of Duty in the Tariff Act of 1930 and in the Tariff Act of 1922. The rates are the calculated rates based on 1928 imports.
[3] Average, 1923–1928.

The following table shows many other commodities whose exports exceed imports. In these classifications many types and grades can be domestically produced at lower cost than they can be produced abroad. On such types and grades of goods the tariff is nominal. Of course this is true only to the extent that foreign dumping of American goods is not practiced. No real study has been made of American dumping and it is impossible to state to what extent it exists. However, systematic dumping is not likely to be widely prevalent in the absence of monopolistic conditions. Why should a manufacturer sell abroad if he can get more in this country? If one firm tries to hold the domestic price above the export price his competitors will try to reap the advantage and the domestic price will fall. Some dumping doubtless exists, and possibly much dumping. At any rate, if the tariff duties shown in this chapter are not nominal and only appear to be nominal because of American dumping, they still might lose their justification. For no one would hold that tariff duties should be established behind which systematic dumping may be practiced.

Excluding sugar, candy, and unmanufactured articles, the domestic production entered in values in the tables in this chapter amounts to about $20,000,000,000. The domestic production of many of the articles appearing in these tables is not given, and many dutiable articles on an export basis are omitted. It is conservative to say that the domestic production of manufactured articles exported more than imported amounts to $25,000,000,000, nearly half of the manufactures of the United States.

However, the following consideration should not be neglected. The United States is able to pay high wages and export many manufactured goods because of its mass production based on the enormous domestic market. European countries often can not, at present, adopt American methods of mass production because they lack a large enough buying market. If the United States tariff were removed and the American market were permanently unrestricted, Europeans could adopt American mass methods to supply the American market and thereby lower their cost.

Some dutiable commodities of which exports exceed imports

[Source: United States Tariff Commission, Summary of Tariff Information, 1929, and Commerce and Navigation]

Commodity	Production			Imports				Exports		Principal countries to which exported
	Year	Quantity	Value	Year	Quantity	Value	Equivalent ad valorem rate	Quantity	Value	
							Per cent			
Boric acid	1927	21,609,603 pounds	$1,582,565	1928	405,545 pounds	$19,895	[1] 24.61	3,382,183 pounds	$189,627	Canada, Japan, United Kingdom.
Bleaching powder	1925	115,438 tons	3,964,604	1928	3,146,796 pounds	79,589	[1] 10.77	21,869,528 pounds	369,589	Canada, Cuba, Mexico, Europe.
Calcium carbide	1925	127,600 tons	6,559,378	1928	2,527,215 pounds	91,975	[1] 26.59	3,745,899 pounds	173,382	Cuba, Mexico, Philippines, Europe.
Tailors' and billiard chalk				1928	82,352 pounds	5,562	[1] 25.00	1,560,472 pounds	204,121	Canada, United Kingdom, Philippines.
Chestnut extract	1925		5,065,347	1928	Negligible			10,651,519 pounds	351,392	Canada, Cuba, Mexico, Europe.
Logwood extract	1925		1,205,005	1928	128,750 pounds	22,846	15.00	2,099,035 pounds	206,102	Canada and United Kingdom.
Formaldehyde	1927	29,920,072 pounds		1928	64,854 pounds	13,381	[1] 25.52	2,368,086 pounds	199,357	Japan and United Kingdom.
Ink and ink powders	1925		40,837,644	1928	134,686 pounds	46,390	20.00		2,171,341	Cuba and Philippines.
Lead arsenate	1927	18,728,054 pounds		1928	Negligible			1,093,673 pounds	141,235	Canada, Mexico, Cuba.
Hydrogenated oils and fats	1928	578,470,248 pounds		1928	57,909 pounds	11,603	[1] 24.19	5,680,959 pounds	759,569	Mexico and Cuba.
Peppermint oil	1923	119,750 pounds	393,856	1928	812 pounds	3,353	25.00	176,718 pounds	604,320	Canada and United Kingdom.
Plasters				1928	8,445 pounds	10,418	20.00	385,521 pounds	452,029	United Kingdom, Canada, Argentina, Spain.
Pigments, colors, stains, and paints, n. s. p. f.	1925			1928	1,883,599 pounds	148,576	25.00		8,440,849	Cuba, Canada, Mexico, Australia, United Kingdom.
Gas black, lamp black, and other black pigments	1927	265,388,842 pounds	14,461,584	1928	1,794,911 pounds	71,675	20.00	81,654,081 pounds	7,013,356	Canada, France, Germany, United Kingdom.
Varnishes	1927	99,055,300 gallons		1928	28,700 gallons	49,843	[1] 25.18	850,093 gallons	1,370,112	France, Canada, Argentina, United Kingdom, Germany.
Zinc oxide or leaded zinc oxide	1925	183,104 tons	25,407,629	1928	2,910,316 pounds	234,177	[1] 21.92	29,598,165 pounds	1,849,889	Canada and England.
Soaps	1925	2,935,514,366 pounds	241,599,178	1928	6,936,641 pounds	1,184,823	[1] 22.54	63,876,489 pounds	6,502,414	Canada, Mexico, Panama, Philippines, United Kingdom, China.
Sodium bicarbonate	1927	120,950 tons	3,639,341	1927	103,666 pounds	3,309	([2])	18,287,460 pounds	338,155	Canada, Japan, Cuba, Mexico, Europe.
Sodium carbonate, calcined or soda ash	1927	2,038,299 tons		1927	99,372 pounds	4,431	5.61	40,802,301 pounds	977,414	Canada, Cuba, Mexico, Japan, Europe.
Sodium borate or borax, refined	1927	64,864 tons	5,079,278	1928	210,534 pounds	4,906	[1] 1.48	135,702,837 pounds	3,454,171	England, Germany, Japan.
Sodium carbonate, hydrated or sal soda, and monohydrated and sesquicarbonate.	1927	98,482 tons	2,775,724	1926	41,024 pounds	1,733	5.92	12,652,716 pounds	159,810	United Kingdom, Germany, Netherlands, Japan, France.
Sodium chloride	1927	7,568,690 tons	24,817,962	1928	85,712,000 pounds	149,559	[1] 18.41	290,792,498 pounds	1,185,682	Canada, Cuba, Mexico.
Sodium hydroxide	1927	1,187,946,000 pounds		1928	109,179 pounds	14,760	[1] 2.52	119,414,865 pounds	3,487,832	Cuba, Mexico, Japan.
Sodium silicate	1927	499,857 tons	6,745,405	1928	149,235 pounds	3,187	[1] 18.83	59,307,272 pounds		Canada and Europe.
Starch, potato and other	1925	874,308,294 pounds	34,924,905	1928	19,083,203 pounds	727,287	[1] 44.69	241,081,982 pounds	8,089,359	United Kingdom.
Dextrine	1921	18,840,834 pounds	490,872	1928	2,843,619 pounds	144,179	[1] 36.03	21,390,956 pounds	929,436	Canada, Japan, United Kingdom.
Clays or earths, unwrought or unmanufactured	1927	3,250,106 tons	9,425,520	1928	56,314 tons	544,094	10.64	108,080 tons	1,390,591	Canada, Mexico, United Kingdom, Cuba, Germany.
Carbon products	1925		13,955,483	1928		334,380	45.00	23,848,284 pounds	2,892,340	United Kingdom, Germany, France, Canada, Japan.
Articles or wares of graphite: Crucibles, etc	1923–24	9,215 tons	1,098,347	1927	2,583 (number)	1,812	45.00	3,421 (number)	12,399	Brazil, China, Europe.
Glass bottles and other glass containers	1927		114,380,546	1928		246,683	39.37		3,514,936	Canada, Cuba, United Kingdom.
Lenses of glass or pebble	1295		2,743,674	1928		159,299	39.94	3,482,881 (number)	465,359	Canada, Australia, United Kingdom, Brazil.
Incandescent electric-light bulbs and lamps	1925	388,365,000 (number)	73,558,210	1928	52,561,317 (number)	1,406,701	20.00	14,457,570 (number)	2,060,269	Canada, Australia, Latin America, Europe.
All glass or manufactures of glass or paste or of which glass or paste is the component material of chief value.				1928		282,934	50.00		2,681,111	Canada, Mexico, Cuba, Philippine Islands, Colombia, Europe.
Monumental and building stone other than granite unmanufactured and manufactured.				1928		277,174	19.99		1,718,958	Canada, Cuba, Mexico, Europe.
Grindstones	1927	31,931 tons	1,554,750	1928	1,583 tons	114,874	2.41	10,632,753 pounds	561,317	Canada, Cuba, Argentina, Mexico, Europe.
Slates, slate chimney pieces, mantels, slabs for tables, roofing slates, and all other manufactures of slates not specially provided for.	1927		11,380,736	1926		86,681	15.00		353,547	Canada, New Zealand, Europe.
Iron and steel scrap	1927	27,000,000 tons		1928	63,265 tons	996,010	4.76	516,148 tons	6,615,359	Canada, Japan, Italy, Europe.
Steel ingots, blooms, slabs, etc	1928	51,650,000 tons		1927	246,425,444 pounds	4,929,946	26.19	202,653 tons		Canada, Cuba, United Kingdom.
Alloy steel bars				1928	10,901,000 pounds	857,118	33.21	31,535,381 pounds	1,486,568	Canada, United Kingdom, Mexico, Philippine Islands, Chile.
Plates and skelp	1927	7,139,662 tons		1928	17,966,771 pounds	250,403	36.62	686,800,871 pounds	14,104,088	Canada, Mexico, Philippine Islands, Brazil, Cuba, Netherlands.
Iron or steel sheets, common or black	1927	7,397,889 tons		1928	43,239,595 pounds	816,795	24.59	179,279 tons	13,575,981	Canada, Japan, Philippine Islands, Brazil, Cuba, Netherlands.
Tin plates, terneplates, and taggers tin	1927	3,748,844,920 pounds		1928	2,065,254 pounds	152,666	13.53	558,570,866 pounds	26,317,030	Asia, South America, North and Central America, West Indies.
Structural shapes	1927	3,742,445 tons		1928	165,478 tons	5,377,129	16.24	291,515 tons	15,545,800	Canada, Cuba, Chile, Japan, Europe.
Hoop, band, and scroll iron or steel	1927	499,429 tons		1928	40,465,079 pounds	681,417	21.05	131,101,349 pounds	3,978,974	Canada, Mexico, Japan, Australia, Europe.
Iron and steel wire plain or coated and strips	1925	3,965,472 tons		1928	12,948,551 pounds	1,695,470	25.09	103,296,482 pounds	3,467,289	Canada, Argentina, Mexico, Europe.
Wire, nonferrous, n. p. f., except gold, silver, or platinum	1925	614,156,992 pounds	111,417,565	1928	251,690 pounds	151,528	25.00	103,000,788 pounds	2,624,195	Canada, Argentina, Mexico, Japan, Cuba, United Kingdom.
Wire strand and rope	1925		46,684,334	1928	4,007,876 pounds	312,189	35.00	12,028,053 pounds	1,577,875	Canada, South America, Europe.
Galvanized fencing wire, galvanized wire fencing, and wire for baling.	1925	325,020 tons	27,576,443	1928	3,698,341 pounds	104,302	17.73	11,519,928 pounds	637,920	Canada, Cuba, Mexico, Philippine Islands, United Kingdom.
Woven-wire cloth	1928	670,000,000 square feet		1928	17,148,549 square feet	197,500	30.85	4,220,876 pounds	626,171	Canada, Cuba, Mexico, Australia, South America.
Ball and roller bearings	1925		100,000,000	1928	1,086,795 pounds	898,554	57.09	4,176,309 pounds	2,325,583	Canada and Great Britain.
Rails	1927	3,685,304 tons		1928	38,972,235 pounds	566,703	76.33	232,912 tons	6,925,616	South America, Far East, Europe.
Wheels for railway purposes	1925	147,777 tons		1928	2,438,612 pounds	123,188	19.80	17,154 tons	1,309,196	Mexico, Canada, Cuba, Chili, Europe.
Cast-iron pipe	1927	1,970,282 tons		1928	136,933,585 pounds	1,789,732	20.00	49,248 tons	2,001,807	Canada, Cuba, Mexico, various Central and South American countries, Europe.
Iron castings (other than cast-iron pipe)	1928	4,000,000 tons		1928	3,446,437 pounds	248,148	20.00	12,059 tons	1,517,737	Canada, Cuba, Mexico, Argentina, Europe.
Tubes, pipes, and tanks	1927	3,981,591 tons		1928		4,628,361	23.19	577,336,136 pounds	26,146,096	Canada, Cuba, Mexico, Argentina, Japan, United Kingdom, Dutch East Indies.
Chains	1927		24,405,993	1928	2,163,580 pounds	203,541	34.61	15,048,924 pounds	2,477,963	Canada, Cuba, Mexico, Argentina, Japan, Australia, Europe.
Cut nails and spikes	1927	70,283,600 pounds		1928	3,609,353 pounds	89,915	16.06	2,904,151 pounds	113,217	Latin American countries, Europe.

See footnotes at end of table.

Some dutiable commodities of which exports exceed imports—Continued

[Source: United States Tariff Commission, Summary of Tariff Information, 1929, and Commerce and Navigation]

Commodity	Production			Imports				Exports		Principal countries to which exported
	Year	Quantity	Value	Year	Quantity	Value	Equivalent ad valorem rate	Quantity	Value	
							Per cent			
Horseshoe nails	1927	16,000,000 pounds		1928	330,091 pounds	$50,395	9.83	2,563,732 pounds	$279,466	Colombia, Cuba, Mexico, Japan, Australia, New Zealand, Europe.
Wire nails and spikes	1927	1,438,904,600 pounds		1928	17,848,401 pounds	406,250	17.60	32,583,200 pounds	955,722	Colombia, Philippine Islands, Cuba, Peru, Europe.
Tacks, brads, and staples	1925	60,776,480 pounds	$2,661,914	1928	650,572 pounds	128,776	3.44	1,665,795 tacks	228,590	Cuba, Mexico, Latin America, Brazil, Argentina, Europe.
Horse, mule, and ox shoes	1925	81,273,000 pounds	5,326,203	1928	14,170 pounds	537	9.12	1,048,341 pounds	73,302	Canada, Cuba, Mexico, Australia, Philippines, Europe.
Wood screws of iron or steel	1925		14,776,537	1928	94,945 pounds	14,660	25.00	8,578,836 pounds	970,693	Japan and United Kingdom.
Table, household, kitchen, and hospital utensils	1927		18,000,000	1928	827,502 pounds	213,193	49.40		604,454	Canada and Latin America, Europe.
Aluminum utensils	1927		27,990,354	1928	145,558 pounds	75,156	76.30		643,205	Canada, Australia, Latin America, Europe.
Other household utensils	1927		40,994,720	1928		353,597	40.59		2,200,000	Canada, Australia, Philippines, Cuba, Europe.
Saws	1927		22,627,990	1928		95,961	38.55		2,105,989	Canada, Australia, Japan, United Kingdom.
Plates for printing designs, etc	1925		221,709,227	1928		134,186	25.00		484,152	Canada and United Kingdom.
Saddlery and harness hardware	1925		6,618,220	1928		63,566	50.07		203,853	Canada, Mexico, Argentina, Europe.
Mechanical pencils	1925		6,783,144	1928	12,135 gross	106,876	25.93		851,463	Canada, United Kingdom, Australia, Mexico.
Table, kitchen, butchers', artisans', and similar cutlery	1927		6,487,231	1928	49,408 dozens	234,254	62.51		555,688	Canada, Australia, Latin America, New Zealand, Europe.
Razors, safety, and blades	1927		40,015,761	1928		604,173	169.61		10,738,669	South America and larger European countries.
Dental instruments	1924		853,000	1928		168,495	35.00		1,663,362	United Kingdom, Canada, Japan, Brazil.
Philosophical, scentific, and laboratory instruments	1924		10,550,000	1928		1,801,378	40.00		3,541,838	Canada, Colombia, Cuba, Japan, Philippines, Europe.
Files, rasps, etc	1927		12,346,529	1928	86,942 dozen	157,711	32.12	2,639,160 dozen	3,099,820	England, Latin America, India, Australia.
Breech-loading shotguns and rifles	1927	1,019,590 (number)	12,559,391	1928		476,212	70.39	95,501 (number)	1,072,154	Canada, Australia, Latin America, Europe.
Clocks	1927		33,913,029	1928		1,219,021	65.16		1,452,003	Canada, Australia, British India, New Zealand, United Kingdom.
	1925		56,152,200	1928		499,539	52.27	165,795 (number)	1,790,512	Canada, Cuba, Mexico, China, Brazil, United Kingdom, Japan, New Zealand.
Clockwork mechanism										
Automobiles, automobile bodies and chassis, and parts thereof.	1927		2,537,912,192	1928		1,755,108	[1] 30.64		500,174,431	Canada, Europe, South America, Australia, South Africa.
Airplanes, hydroplanes, and parts	1927		19,250,605	1928		679,934	30.00		3,664,523	Canada, South America, Europe.
Bicycles	1927		7,457,811	1928		34,115	30.00	5,086 pounds	133,848	Mexico, Central America, West Indies, Philippines, Europe.
Steam engines, except locomotives	1925	4,914 (number)	24,411,344	1928	15 (number)	592,744	15.00		3,771,996	Canada, Latin America, Europe.
Sewing machines	1927		45,221,816	1928		484,695	17.97		10,220,361	Great Britain, Japan, Australia, Latin America, and parts of Europe.
	1925		36,034,478	1928	244 (number)	259,116	30.00		6,155,773	Canada, Great Britain, Australia, Latin America.
Printing presses	1925		91,459,403	1928	2,561,938 pounds	565,765	30.00		31,761,538	Canada, Latin America, Japan, Europe.
Machine tools	1927		100,922,791	1928		5,110,113	37.58		12,856,161	Canada, United Kingdom, British India, Germany, Japan.
Textile machinery	1927		14,266,883	1928	591 (number)	2,512,559	40.00		5,963,688	Canada, United Kingdom, Australia, Argentina.
Knitting machinery	1924		6,500,000	1927	Negligible				4,300,000	Great Britain, Australia, Europe, Canada, Latin America.
Circular knitting machines	1927		12,000,000	1928	2,594,998 pounds	510,918	35.00	8,558,985 pounds	1,691,369	Canada, the Orient, Europe.
Cotton-yarn machinery				1928	433,428 pounds	125,650	35.00	1,763,852 pounds	598,632	Canada, Great Britain, China, Japan.
Silk-yarn machinery				1928	Unknown				693,128	Canada, United Kingdom, Australia, Argentina.
Looms and finishing machinery	1927		18,756,593	1928	2,755,115 pounds	717,144	35.00	13,925,982 pounds	4,260,138	Canada, Great Britain, India, Japan, France, Germany.
Other textile machinery	1925		20,000,000			10,377,310	30.00		250,496,299	Canada, Mexico, South America, Great Britain, France, Japan, Australia, New Zealand.
Miscellaneous machinery	1925		1,438,331,820	1928						
Shovels, spades, scoops and drainage tools	1923		15,841,086	1928	45,228 (number)	16,081	30.00	35,912 (number)	357,961	Argentina, Mexico, Australia.
German silver or nickel silver				1928	25,553 pounds	11,513	29.64	1,404,549 pounds	364,138	Canada, Belgium, Netherlands, British India.
Azides, fulminates, fulminating powders, and other like articles, n. s. p. f.				1928	58,493 pounds	116,945	6.25		934,295	Mexico and South America.
Types	1927		2,683,704	1928	149,959 pounds	69,039	20.00	768,817 pounds	443,317	Practically all the important countries of the world.
Lead, metal alloys, crude or manufactured	1927	1,107,877 tons		1928	36,560,440 pounds	2,099,457	37.09	244,472,237 pounds	11,856,153	England, Germany, France, Asia, South America.
Zinc ore	1927	708,610 tons	60,000,000	1928	762,700 pounds	22,309	28.25	4,034 tons	205,928	England, Belgium, Germany.
Manufactures of metal, n. s. p. f.	1923		4,152,744,000	1927		10,135,910	42.37		82,000,000	Canada, Japan, Latin America, Europe, China, Australia.
										England.
Logs of fir, spruce, cedar, or Western hemlock	1926	10,331,136 thousand feet		1928	140,767 thousand feet	2,152,299	[1] 7.42	296,003 thousand feet	6,467,469	Japan, Canada, Mexico, Germany, Venezuela.
Veneer	1925	734,599 thousand feet		1928	6,180,808 square feet	249,463		83,773,633 square feet	2,247,840	Canada, United Kingdom, Australia.
Casks, barrels, hogsheads, empty	1925		67,735,000	1928	79,180 (number)	83,425	15.00	357,139 (number)	814,324	Canada, Mexico, Argentina, British West Africa, United Kingdom, Netherlands, Cuba.
Butchers' and packers' skewers of wood	1927		500,000	1928	561,000 (number)	295	[1] 20.00		250,000	United Kingdom, Australia, South Africa, South America.
Cigars (including cheroots) and cigarettes	1927	106,778,888 thousand		1928	398,160 pounds	3,345,776	63.43	11,706,110 thousand	22,059,149	China, British Malaya, Siam, Philippines, Panama, France.
Tallow, oleo oil, and oleo stearin	1927	930,164,000 pounds		1928	15,727,506 pounds	1,240,915	7.91	77,000,000 pounds	9,599,363	Mexico, Holland, England, Germany.
Fresh pork	1927	8,533,000,000 pounds		1928	7,681,653 pounds	1,475,390	3.76	28,800,000 pounds		United Kindgom, Cuba, Canada, Bermuda, Philippines.
Hams, bacon, shoulders, and other pork, prepared or preserved.	1925	3,296,000,000 pounds		1928	5,059,553 pounds	1,887,422	[1] 5.82	289,834,000 pounds		Great Britain, Cuba, Germany, Finland, Poland, Sweden.
Lard, lard compounds, and lard substitutes	1927	2,356,000,000 pounds		1928	171,372 pounds	([3])	([3])	783,000,000 pounds		Great Britain, Germany, Cuba, Netherlands, Mexico.
Condensed or evaporated milk and related products	1927	2,145,369 thousand pounds		1928	7,266,427 pounds	871,035	[1] 16.72	119,567,357 pounds	15,130,492	United Kingdom, Cuba, Philippines.
Oleomargarine	1927	257,157,000 pounds		1928	None			644,565 pounds	107,064	Canada, Panama, British West Indies, Belgium, Netherlands.
Horses, and mules	1928	21,107,000 (number)		1928	2,883 (number)	715,866	[1] 21.96	35,526 (number)	3,615,814	Canada, Mexico, Cuba, Spain.
Salmons, canned	1927	242,566,656 pounds		1928	Negligible			40,951,505 pounds	7,661,536	United Kingdom, Philippines, Australia, Canada.
Sardines	1927	154,584,108 pounds	14,517,814	1928	29,243,293 pounds	5,154,491	30.00	80,253,474 pounds	6,522,711	Philippines, British Malaya, Dutch East Indies, British India, Argentina.
Barley malt	1925		24,070,000	1928	865,410 pounds	34,446	[1] 8.33	3,259,794 bushels	3,607,532	Canada, Brazil, Cuba.
Buckwheat, etc	1928	13,163,000 bushels	11,525,000	1928	66,000 bushels	57,236	[1] 5.82	160,545 bushels	169,309	Netherlands and Northern Europe.
Buckwheat flour	1925	47,872,569 pounds	1,913,003	1925	80,846 pounds	2,139	18.90	497,813 pounds	25,575	Netherlands, Germany, Canada, Belgium.

See footnotes at end of table.

Some dutiable commodities of which exports exceed imports—Continued

[Source: United States Tariff Commission, Summary of Tariff Information, 1929, and Commerce and Navigation]

Commodity	Production			Imports				Exports		Principal countries to which exported
	Year	Quantity	Value	Year	Quantity	Value	Equivalent ad valorem rate	Quantity	Value	
							Per cent			
Corn	1928	2,839,959 thousand bushels		1928	583,378 bushels	$627,486	[1] 18.88	25,799,000 bushels	$26,367,356	Canada, Cuba, Mexico, United Kingdom, Denmark, Netherlands.
Macaroni, vermicelli, noodles	1925		$43,489,344	1928	3,424,503 pounds	$369,845	[1] 21.18	9,979,375 pounds	$900,113	Canada, United Kingdom, Mexico, Dominican Republic.
Oats	1928	1,449,531,000 bushels	592,674,000	1928	489,368 bushels	320,508	[1] 40.04	10,421,056 bushels	5,217,414	Canada and Netherlands.
Rice	1927	1,232,000 thousand pounds		1928	27,247,339 pounds	1,212,190	[1] 41.23	378,959,000 pounds	13,235,000	United Kingdom, Japan, Germany, Latin America, Porto Rica, Hawaii.
Rye flour	1925	1,598,058 barrels	9,152,049	1928	10,100 pounds	487	[1] 7.83	31,650 barrels	188,534	Norway, Sweden, Canada.
Wheat	1927	871,691,000 bushels		1928	224,133 bushels	280,690	[1] 32.60	96,290,418 bushels	119,887,583	United Kingdom and European countries.
Wheat flour	1925	114,689,930 barrels	910,169,949	1928	3,866 barrels	26,917	[1] 29.63	11,848,042 barrels	73,835,258	United Kingdom, Netherlands, Cuba, Germany.
Biscuits, wafers, cake, cakes, and similar baked articles and puddings	1925		473,745,566	1928	2,374,661 pounds	722,560	30.00	10,678,411 pounds	1,986,449	Canada, Colombia, Venezuela, Mexico, Cuba.
Apples, green or ripe	1928	61,640,000 barrels		1928	114,606 bushels	211,362	[1] 12.60	4,544,972 barrels	26,662,997	United Kingdom, Canada, Germany, Netherlands, Argentina, Brazil.
Apples, prepared or preserved	1925	2,604,173 cases	6,950,977	1928	764 pounds	146	[1] 22.02	21,446,530 pounds	1,187,762	United Kingdom, Canada, Panama, China.
Apricots, prepared or preserved, not dried or in brine	1925	87,349,050 pounds	7,667,981	1928	1,083,723 pounds	55,507	35.00	28,765,080 pounds	2,643,661	Great Britain, Germany, Netherlands, Denmark.
Berries, edible, in their natural condition				1928	[4] 6,768,735 pounds	[4] 598,469	[1] 14.99	14,240,000 pounds	1,434,000	Canada, United Kingdom.
Berries, dried, desiccated, evaporated, or otherwise prepared or preserved	1925	2,502,000 cases	9,080,000	1928	108,983 pounds	17,400	[1] 33.96	13,089,370 pounds	1,333,935	United Kingdom, Canada, Cuba, Australia.
Cherries, canned	1925	1,877,880 cases	7,253,125	1928	Not shown separately			73,415 cases	345,856	China, Canada, British India, United Kingdom.
Vinegar	1925		16,317,718	1928	274,169 gallons	84,446	[1] 12.84	226,162 gallons	140,339	Canada, Mexico.
Grapes	1928	5,272,000 thousand pounds		1928	138,111 cubic feet	317,909	[1] 7.32	53,610,000 pounds	2,505,000	Canada, Cuba, Mexico.
Raisins and other dried grapes	1928	510,000,000 pounds		1928	2,206,865 pounds	304,738	[1] 15.68	226,490,000 pounds	12,675,000	United Kingdom, Canada, Germany, the Netherlands.
Oranges	1928	3,139,000 thousand pounds	130,500,000	1928	1,723,139 pounds	111,156	[1] 17.92	197,153,013 pounds	13,912,198	Canada, Great Britain.
Grapefruit	1928	584,000,000 pounds	20,400,000	1928	7,643,512 pounds	199,375	[1] 29.79	49,601,967 pounds	2,904,161	Canada, United Kingdom.
Peaches, green or ripe	1928	68,374,000 bushels	63,649,000	1928	305,964 pounds	14,825	[1] 6.61	22,180,514 pounds	730,301	Canada, Cuba, Mexico, United Kingdom.
Peaches, prepared or preserved	1927	11,155,602 cases		1928	4,625 pounds	953	35.00	96,237,096 pounds	7,667,410	United Kingdom, Canada, Cuba, France.
Canned pineapple	1927	409,570,135 pounds	33,618,589	1928	2,584,403 pounds	161,067	[1] 19.86	54,394,244 pounds	4,885,206	Germany, United Kingdom.
Plums, prunes, and prunelles, dried	1928	386,000,000 pounds	19,300,000	1928	615,746 pounds	40,996	[1] 4.90	267,704,390 pounds	16,221,083	Germany, United Kingdom, France, Canada, Netherlands, Northern European countries.
Plums and prunes, prepared or preserved	1927	607,915 cases		1928	156,341 pounds	25,143	35.00	2,231,340 pounds	217,774	United Kingdom, India, Mexico, Canada, Australia, Cuba.
Cut flowers	1919		61,000,000	1928		131,945	40.00		178,813	Canada.
Beans in brine, prepared or preserved in any manner	1925	24,441,416 cases	55,164,716	1928	1,299,541 pounds	116,800	[1] 22.80	14,016,506 pounds	1,196,384	United Kingdom, Cuba, Canada, Mexico, Panama.
Peas, prepared or preserved in any manner	1927	12,936,000 cases		1928	1,229,050 pounds	140,986	[1] 16.15	6,487,092 pounds	574,818	Canada, Cuba.
Vegetables, if cut, sliced, or otherwise reduced in size, or if parched or roasted, or if pickled, or packed in salt, brine, oil, or prepared or preserved in any other way not specially provided for:										
Canned asparagus	1925	1,475,765 cases	10,487,334	1928	66,800 pounds	5,724	35.00	17,717,985 pounds	2,705,401	Australia, United Kingdom, Canada, Germany.
Pickles or cucumbers	1927	2,663,000 bushels	2,530,000	1928	859,631 pounds	71,962	35.00	4,486,715 pounds	393,334	Canada, Cuba, Philippines, Australia.
Sauces of all kinds not specially provided for	1925		62,905,726	1928	12,208,227 pounds	844,126	35.00	12,790,809 pounds	1,638,670	United Kingdom, Canada, Philippines, Japan, China.
Soups, canned	1923	14,185,857 cases	27,134,649	1928	87,786 pounds	15,744	35.00	28,278,931 pounds	2,603,442	Canada, United Kingdom, Australia, Panama, Cuba.
All coffee substitutes and adulterants and coffee essence				1928	20,555 pounds	8,249	[1] 11.16	1,109,162 pounds	709,563	Canada, United Kingdom.
Hops, hop extract, and lupulin	1928	32,742,000 pounds		1928	614,186 pounds	230,151	[1] 38.32	7,984,681 pounds	1,804,230	United Kingdom, Canada, Ireland, Belgium, France.
Cotton yarn	1919	2,346,854,120 pounds		1928	2,580,223 pounds	3,323,376	[1] 28.20	26,624,512 pounds	15,602,316	Argentina, Canada, Uruguay, Brazil, Australia, Chile, United Kingdom, Colombia, Mexico.
Countable cotton cloths	1925	6,693,129,462 square yards	883,862,418	1928	58,918,084 square yeards	15,363,796	30.73	525,360,022 square yards	72,504,157	Philippines, Cuba, Canada, Central America, Argentina, Colombia, Mexico, Haiti, Chile, United Kingdom.
Special cloths (filled, coated, or waterproofed):										
Cotton window hollands				1928	446,898 square yards	127,995	30.47	2,865,880 square yards	533,176	United Kingdom.
Filled or coated cotton cloths, n. s. p. f	1927		28,543,502	1928	929,139 square yards	152,999	38.32	6,201,809 square yards	3,555,118	Australia, United Kingdom, Canada, Cuba, Mexico, Sweden.
Waterproof cloth				1928	982,564 square yards	361,284	43.59	4,123,708 square yards	2,149,033	Australia, United Kingdom, Argentina, Canada, Italy.
Cotton cloths, containing silk or artificial silk	1925	260,396,682 square yards	70,893,996	1928	331,689 square yards	182,907	[1] 41.52	15,076,939 square yards	4,157,644	Canada, Australia, Germany, Mexico.
Household articles of cotton	1925	262,033,289 square yards	72,875,239	1928		1,395,548	[1] 30.21		2,410,728	Canada, Dominican Republic, Cuba, Colombia, Mexico, Honduras, Argentina, Philippines.
Cotton small wares and belting for machinery	1925		61,992,908	1928		583,577	[1] 32.15		3,993,795	Canada, Germany, United Kingdom, Argentina.
Cotton hosiery	1927	46,289,824 dozen pairs	71,034,787	1928	558,611 dozen pairs	1,938,769	[1] 49.88	3,876,517 dozen pairs	6,729,106	Cuba, Canada, United Kingdom, Peru, Mexico, Colombia, Dominican Republic, Chile, Philippines, Argentina, British South Africa.
Cotton knit underwear	1925	19,615,747 dozen	110,522,609	1928	53,201 dozen	326,052	45.00	583,604 dozen	2,108,485	United Kingdom, British South Africa, Cuba, Dominican Republic, Panama.
Cotton wearing apparel				1928		1,374,126	[1] 34.84		7,445,764	Cuba, Panama, Colombia, West Indies, Honduras, Guatemala, British South Africa, Mexico, Australia, Peru, United Kingdom, Panama, Canada.
Jute yarns, roving, twist, twine, and cordage	1927	135,269,411 pounds	22,088,512	1928	514,996 pounds	75,783	25.66	1,247,024 pounds	195,003	Canada, Cuba, Mexico.
Gill (fish) netting and nets	1927		5,401,000	1928	46,259 pounds	49,157	[1] 41.00		[5] 1,300,000	Canada.
Linoleum and floor oilcloth	1927	49,921,494 square yards	42,039,062	1928	744,378 square yards	785,587	35.00	1,720,856 square yards	1,173,482	Australia, United Kingdom, New Zealand.
Wool felts	1925		43,775,618	1927	31,381 pounds	66,613	56.24	238,459 pounds	305,719	Canada, Japan, Mexico.
Silk knit goods: Silk hosiery	1927	30,635,129 dozen pairs	289,485,604	1928	14,733 dozen pairs	204,884	60.00	899,824 dozen pairs	9,657,763	Australia, Argentina, British South Africa, United Kingdom, Canada, Cuba, New Zealand.
Artificial-silk knit goods	1925		195,507,194	1928	29,420 pounds	147,400	[1] 69.69		3,948,111	United Kingdom, Cuba, Colombia, Philippines.
Printing paper, n. s. p. f	1927		159,948,574	1928	7,315,818 pounds	341,860	[1] 15.13	24,510 thousand pounds	1,789,604	Canada, Cuba, Philippines, Australia.
Paper boards	1927	7,547,216 thousand pounds	211,263,855	1928	19,660,642 pounds	442,988	10.00		5,792,880	Canada, China, Cuba, United Kingdom.
Sheathing and roofing paper and felts	1927	1,251,178 thousand pounds	40,062,024	1928	1,628,486 pounds	86,259	10.00	14,844 thousand pounds	550,679	Canada and United Kingdom.

See footnotes at end of table.

Some dutiable commodities of which exports exceed imports—Continued

[Source: United States Tariff Commission, Summary of Tariff Information, 1929, and Commerce and Navigation]

Commodity	Production			Imports				Exports		Principal countries to which exported
	Year	Quantity	Value	Year	Quantity	Value	Equivalent ad valorem rate	Quantity	Value	
							Per cent			
Tissue paper, etc.	1927	632,140 thousand pounds	$46,616,919	1928	3,556,736 pounds	$2,032,707	[1] 25.15	15,803 thousand pounds	$3,144,553	Canada, United Kingdom, Australia, Argentina.
Surface-coated papers	1927	393,962 thousand pounds	25,114,098	1928	2,522,207 pounds	1,148,655	[1] 26.96	13,194,358 pounds	1,478,106	Canada, United Kingdom, Cuba.
				1928	4,321,755 pounds	1,260,683	[1] 30.37	1,924,855 pounds	2,013,620	Japan, Canada, Cuba, Venezuela.
Photographic paper	1925		98,721,000	1928	3,160,268 pounds	1,673,311	[1] 25.14		3,369,809	Canada, Greece, United Kingdom, China, Brazil, Cuba.
Lithographic prints, pictures, calendars, cards, cigar bands, decalcomanias, etc.										
Fine papers	1927	1,017,616 thousand pounds	105,148,140	1928	3,180,059 pounds	817,248	[1] 29.61	26,585,886 pounds	3,029,013	Canada, Cuba, China, Mexico, Central and South American countries.
Envelopes	1927		55,903,895	1928	712,888 pounds	269,021	[1] 36.24	2,453,119 pounds	405,505	Cuba, Canada, Philippines.
Wrapping paper	1927	2,447,298 thousand pounds	125,510,382	1928	26,808,050 pounds	792,268	30.00	36,757 thousand pounds	2,586,848	Canada, Mexico, Cuba.
				1928		4,933,438	[1] 20.46		20,127,503	Canada, United Kingdom, Australia, Philippines, Greece, Cuba, China.
Bound and unbound books of all kinds										
Playing cards	1921		8,940,573	1928	295,790 packs	102,235	[1] 58.15	6,524,687 packs	751,886	Orient, India, British Malaya, China, Hong Kong, Straits Settlement.
				1928	484,757 pounds	78,535	[1] 30.00	61,539,772 square feet	2,068,788	United Kingdom and Canada.
Papers, paper board, etc., cut, embossed, stamped, laminated, printed, etc., container board, boxes, manufactures of paper, etc.										
Boxes composed of paper, papier-mâché, or paper board, n. s. p. f.	1925		291,997,062	1928	865,955 pounds	219,474	35.00	28,434,923 pounds	1,899,446	Canada, Spain, Mexico, Cuba, United Kingdom.
Manufactures of paper, n. s. p. f.	1925		54,421,553	1928		2,265,043	35.00		5,506,809	Canada, United Kingdom, Cuba, Mexico, Australia.
Asbestos manufactures	1925		33,620,099	1928	56,859,768 pounds	1,089,264	25.60		3,644,836	Canada, Cuba, Mexico, South America.
Footwear with uppers of wool, cotton, ramie, animal hair, fiber, or silk substitutes.	1927	31,092,370 pairs		1928	1,145,660 pairs	292,068	35.00	5,313,375 pairs	3,674,723	Cuba, Philippines, Argentina, British India.
Brooms	1927		18,444,912	1928	236,693 (number)	10,751	[1] 15.00	15,942 dozen	84,585	Philippines, Central and South America.
Emery, corundum, and artificial abrasive, in grain, or manufactured.	1925		41,293,154	1928		157,674	18.09	16,743 tons	4,240,033	England, Canada, Germany, Australia.
Cartridges and paper shells	1927		29,666,557	1928		52,090	30.00		2,824,905	Canada, Brazil, Argentina, Australia.
Blasting caps and railroad torpedoes	1927		7,302,662	1928	4,000 pairs	45	[1] 15.80	31,441,423 (number)	344,874	Mexico, Chile, Peru, Columbia.
Mining, blasting, and safety fuses	1927		5,226,829	1927		1,651	27.01		564,420	Mexico, Peru, Chile, Cuba.
Fur wearing apparel	1925		254,265,708	1928		135,319	44.09		184,445	Canada, United Kingdom, France.
Enameled upholstery leather	1927			1928	105,029 square feet	33,274	20.00	2,396,269 square feet	529,311	Canada, Japan, United Kingdom, Denmark.
Glove leather	1928			1928	178,447 square feet	63,996	20.00	7,055,060 square feet	1,286,527	Canada and United Kingdom.
Other manufactures of india rubber or guttapercha, n. s. p. f.	1928		230,645,526	1928		936,250	25.00		12,675,606	United Kingdom, Canada, Mexico, Cuba, Chile, Argentina, Japan, France.
Automobile, motor cycle, bicycle, and inner tubes	1927		777,668,671	1928	4,462	67,265	10.00	4,282,289	36,925,348	Every tire-using country in the world.
India rubber known as hard rubber, n. s. p. f.	1927		18,590,686	1928		127,003	35.00		681,154	England, Australia, France, Japan, Latin America.
Pianos and player pianos	1927	215,732	66,081,920	1928	54	24,141	40.00	9,615	2,680,774	Australia and Canada.
Phonographs and gramophones	1927	1,046,387	49,242,170	1928	187,805	125,592	30.00	230,303	7,198,346	Argentina, Colombia, Mexico, Chile, Brazil, Australia, Canada.
									3,788,670	Do.
Parts of phonographs, including records	1927		41,624,220	1928		373,953	37.50		1,967,563	England, Canada, Cuba, Mexico, Japan.
Lead pencils, crayons, mechanical pencils, n. s. p. f., pencil point protectors, and clips and slate pencils.	1927		24,492,984	1927		650,620	24.92			
Photographic cameras and parts, n. s. p. f.	1927		16,406,980	1928		350,316	20.00		2,423,612	England, Canada, Australia, New Zealand, France.
Photographic film positives for motion pictures	1925		93,636,348	1927		167,943	22.71		5,775,730	Australia, Canada, Argentina, Brazil, France, Germany, Mexico, United Kingdom.

[1] Corresponding percentage for the year 1927. The figures for 1928 are not given in the source.
[2] Not given.
[3] Mostly free.
[4] Include berries in brine.
[5] Exports are shown to Canada only.

CHAPTER V

EQUIVALENT AD VALOREM IMPORT DUTIES OF CERTAIN COUNTRIES

Foreign customs duties are usually specific and often so detailed and complicated that any generalization as to their incidence can be made only with great difficulty by the average student.

In order to place such rates on a simple homogeneous basis and average them, they may be stated as a percentage of the value of the commodity on which the duty is paid. Specific rates so reduced to percentages are called "equivalent ad valorem rates" or "equivalent ad valorem duties."

The following tables give the equivalent ad valorem rates upon important classes of commodities in England, Germany, Italy, France, and Canada. Except in the case of France and Canada, the tables give the duties on commodities from all countries combined, and not those from the United States separately. However, England, Germany, and Italy give most-favored-nation treatment to the United States. The duties charged on United States products would, therefore, in general, not be higher in these countries than those charged other countries.

The duties given in the tables all apply to a period several years in the past. Later statistics were unavailable for computation. In Germany, Italy, England, and France no general tariff revisions have been made since the years given but have been made on a number of individual articles, especially on agricultural products.

ENGLAND

England, in 1927, levied revenue duties on imports of the following articles: Beer, playing cards, chicory, cocoa, coffee, dried fruits, hops, matches, silk, rayon, spirits, sugar, table waters, tea, tobacco, and wine. The equivalent ad valorem rate of duty on these articles can not be given because the values on which the duties are imposed are not stated in the statistics. Protective specific duties are charged on cinematograph films and on translucent or vitrified pottery, but the equivalent ad valorem rates can not be given for the same reason as stated for the above articles.

The following table shows the equivalent ad valorem rates of duty on other protected articles, in 1927:

England: Equivalent ad valorem rates of duty on articles subject to protective tariff 1927 [1]

Commodity	Full rate			Preferential rate			Total		
	Value	Duty	Ad valorem	Value	Duty	Ad valorem	Value	Duty	Ad valorem
Clocks, complete	£479,550	£159,848	33.33	£28,369	£2,058	7.25	£488,811	£161,906	33.12
Clocks, parts thereof	104,033	34,677	33.33				104,033	34,677	33.33
Motor cars	2,522,770	840,917	33.33	705,658	159,035	22.54	3,238,428	999,952	30.88
Motor cars, parts of	2,019,889	673,292	33.33	344,888	76,643	22.22	2,364,777	749,935	31.71
Motor cycles	6,049	2,016	33.33				6,049	2,016	33.33
Motor cycles, parts of	35,280	11,759	33.33	15,539	3,453	22.22	50,819	15,212	29.93
Musical instruments, automatic organs	14,303	4,768	33.33				14,303	4,768	33.33
Musical instruments, automatic pianos	17,314	5,772	33.34	1,122	249	22.19	18,436	6,021	32.66
Musical instruments, automatic parts	16,209	5,403	33.33	921	239	25.95	17,130	5,642	32.94
Musical instruments, pianos	153,415	51,154	33.34				153,415	51,154	33.34
Phonographs and gramophones	9,576	3,192	33.33	310	69	22.26	9,886	3,261	32.99
Phonographs and gramophones, parts and motors	176,707	58,900	33.33	76	17	22.37	176,783	58,917	33.33
Stringed musical instruments	61,963	20,654	33.33				61,963	20,654	33.33
Stringed musical instruments, parts	57,500	19,170	33.34				57,500	19,170	33.34
Wind musical instruments	68,868	22,949	33.32				68,868	22,949	33.32
Optical glass and instruments							410,535	205,791	50.13
Scientific glassware							138,965	46,321	33.33
Scientific instruments							144,658	48,214	33.33
Wireless valves and tubes							119,911	39,967	33.33
Magnetos							39,706	13,236	33.33
Arc-lamp carbons							362,879	18,148	5.00
Hosiery, latch needles							59,423	19,806	33.33
Products of metallic tungsten, etc							36,030	12,010	33.33
Synthetic organic chemicals							552,942	184,002	33.28
Lace of cotton, silk, etc	575,529	191,822	33.33	3,716	826	22.23	579,245	192,648	33.26
Netting and embroidery, etc							41,784	13,924	33.32
Cutlery, knives							53,881	17,957	33.33
Cutlery, scissors							77,845	25,909	33.28
Cutlery, safety razors							33,283	11,078	33.28
Cutlery, razors							19,247	6,416	33.34
Cutlery, parts							117,291	41,041	34.99
Gloves, leather	1,089,948	363,317	33.33	2,344	520	22.18	1,092,292	363,837	33.31
Gloves, woven or knitted							660,706	220,232	33.33
Paper, packing or wrapping	3,223,134	537,178	16.67	52,661	5,851	11.11	3,275,795	543,029	16.58
Silk or artificial silk articles, manufacturing component exceeds 20 per cent	3,355,200	1,118,343	33.33	6,708	1,028	27.72	3,358,908	1,119,371	33.33
Silk or artificial silk articles manufacturing component exceeds 5 but not over 20 per cent	1,121,247	112,116	10.00	9,466	789	8.34	1,130,713	112,905	9.99
Silk or artificial silk articles, manufacturing component not exceeding 5 per cent	1,675,600	33,498	2.00	7,349	123	1.67	1,682,949	33,621	2.00
Watches, gold	266,134	88,720	33.34	325	72	22.15	266,459	88,792	33.32
Watches, silver							150,342	50,112	33.33
Watches, other metals	377,426	125,805	33.33	6,950	1,544	22.22	384,376	127,349	33.13
Watch, movement							120,678	40,240	33.34
Watch, cases of gold	4,906	1,636	33.35	262	58	22.14	5,168	1,694	32.78
Watch, cases of silver							1,114	371	33.30
Watch, cases of other metals	2,330	777	33.35	117	26	22.22	2,447	803	32.82
Watch, parts	51,245	17,079	33.33	388	86	22.16	51,633	17,165	33.24

[1] Source: Great Britain, Annual Statement of Trade of the United Kingdom, 1927, Vol. II, pp. 417, 468.

GERMANY

The following tables show:
(1) Average equivalent ad valorem rates in 1926 and 1927.
(2) Equivalent ad valorem rates on the principal subject divisions of the German imports.

Germany—Equivalent ad valorem rate of customs duties on imports for consumption, free and dutiable, 1926 and 1927 [1]

	1926	1927
	Per cent	*Per cent*
Free and dutiable goods	8	9
On dutiable goods	16	17

[1] Germany, Statistisches Jahrbuch für das deutsche Reich, 1928, p. 568.

Calculated ad valorem rates of duty on dutiable articles, Germany, 1926 and 1927 [1]

Commodity	Ad valorem rate
Grain	17.15
Coffee	57.30
Mineral oil	51.83
Raw tobacco	33.40
Wine	57.93
Butter and margarine	7.61
Cotton goods	16.81
Vehicles	39.65
Wood	6.24
Iron wares	15.30
Cocoa, raw	28.85
Beef and mutton	20.00
Cotton yarn and thread	7.12
Meat and meat extract	20.08
Nuts and fruit	12.35
Cheese	12.53
Silk and silk goods	11.68
Eggs	4.84
Machines	10.17
Tropical fruits and peels	8.00
Mill and bakery products	29.60
Tea	60.70
Sugar	29.72
Wool goods	17.05
Leather and leather goods	4.84
Melted fat	4.96
Wool yarn	2.07
Malt	27.41
Wood wares and other cut wares of vegetable and animal stuff	11.86
Spice	25.36
Clay and glass goods	16.60
Flax and jute yarn and wares therefrom	6.17
Fresh grapes	16.76
Horses	16.32
Rice	7.45
Honey	51.34
Hops and hop merl	8.56
Dry legumes	10.61
Salted herring	6.46
Raw and scrap iron	13.80
Swine	15.51
Tobacco products	50.04
Oyster and other shellfish	113.16
Fatty oils	5.53
Other goods	12.62
Average	16.32
SUMMARY	
Live animals	16.97
Food and drink	18.16
Raw materials and semimanufactures	17.56
Manufactured goods	10.96

[1] Germany, Statistisches Jahrbuch, 1928, pp. 568–569.

FRANCE

The following table shows the equivalent ad valorem rate of duty charged by France on a number of imports from the United States in 1927 and 1928. Some of the rates charged by France on United States products are higher than on like products of other countries. Numerous advances in tariff rates were made by France in 1928.

France—Equivalent ad valorem rates on certain dutiable articles imported from the United States [1]

Commodity	1927
	Per cent
Animals and animal products:	
Meats, salted, pork, and beef products	7.6
Fish, dried, salted, or canned	14.9
Animal fat, other than fish margarine, and similar substances	7.9
Vegetable products:	
Sugars, crude or refined	41.2
Groats, grit (coarse flour), pearled or cleaned grain, semolina, and Italian pastes	22.8
Coffee	24.1
Preparations of sugar (sirups, bonbons, fruits, sweet biscuits, candy, etc.)	19.1
Vegetables, salted, or preserved	9.8
Rice	10.9
Chemical pastes of cellulose	
Table fruits	6.2
Vegetable wax, gums, resins, balsams	
Cereals (grain and flour), including malt	9.0
Volatile oils, vegetable essences, synthetic or artificial perfumes	2.1
Mineral substances:	
Heavy oils and residues of petroleum	31.7
Mineral oils, crude, refined, and essences	22.2
Iron and steel	10.3
Chemical products:	
Colors, inks, and pencils	7.9
Prepared dyes	
Perfumeries and soaps	5.4
Ceramics and glass:	
Faience and porcelain	
Glass and crystal	
Tissues:	
Tissues of cotton	21.6
Tissues of jute, phormium, tenax, etc	
Tissues of silk and silk floss	15.0
Lingerie, clothing, and finished articles	16.2
Paper and manufactures of:	
Books, newspapers, engravings	32.4
Cardboard	25.9
Paper	19.8
Cinematograph rolls	20.1
Hides and skins:	
Manufactures of skins or leather, natural or artificial	13.8
Hides and skins, prepared	8.2
Metal manufactures:	
Imitation jewelry and gilded or plated articles	
Detached parts of machines	16.2
Tools and manufactures of metal	14.2
Machines with motors, steam, and others	9.1
Musical instruments	29.3
Manufactures of wood	8.6
Miscellaneous manufactures:	
Vehicles—	
Automobiles	45.2
Others	23.4
Manufactures of amianthe or asbestos	17.9
Scientific instruments and apparatus	8.7
Toys	10.4
Manufactures of rubber and gutta-percha	8.6

[1] Computed from import statistics in Commerce et Navigation.

ITALY

The following tables show the average equivalent ad valorem rates of duty collected by Italy on all imported goods in 1926 and 1927 and upon the principal classes of commodities separately recorded in the import statistics. The Italian statistics are not arranged in such a way that the dutiable imports can well be separated from the free and dutiable combined.

Italy—Imports for consumption (commercio speciale) and duties collected, 1925 and 1926 [1]

	1925	1926
Imports (lira) [1]	26,200,484,663	25,878,856,807
Customs duties (lira) [2]	445,899,465	564,286,271
Equivalent ad valorem rate (per cent)	1.70	2.18

[1] Italy, Movimento Commerciale del Regno d'Italia, Rome, 1929, p. 8 (excluding gold and silver ore and money).
[2] Ibid, p. 31.

Average calculated ad valorem rates collected on free and dutiable imports into Italy, 1926 [1]

Commodity	Calculated ad valorem rate
Animals	2.61
Meat, broth, soups, and eggs	.28
Milk and dairy products	.76
Fish products	.64
Colonial products, sugar and confections	9.82
Cereals, legumes, tubers, and products	3.92
Cooking herbs and fruits	2.45
Beverages	4.31
Salt and tobacco	.12
Seeds, oil fruits, and their by-products	1.09
Oils and greases, animal and vegetable, and wax	2.45
Hemp, flax, jute, and other vegetable fibers	.51
Cotton	.46
Wool, hair, and pelts	.49
Silk and artificial silk	.78
Clothing, linen white goods and other sewed goods, n. e. s	6.88
Cast iron, iron and steel	3.36
Copper and its alloys	.68
Other common metals and their alloys	.88
Various products of common metal, n. e. s	2.57
Machines and apparatus	3.03
Utensils and instruments for agriculture and arts trade	3.82
Scientific instruments, clocks, and watches	2.00
Arms and munitions	6.40
Vehicles	4.97
Minerals, nonmetallic, rock and earths	.04
Brick, cement, etc	5.26
Ceramic products	6.48
Glass and crystal	6.15
Asbestos, graphite, mica	.74
Wood and cork	.56
Straw and fibers	.44
Materials for inlaid work and carving	.68
Minerals oils, tar, and rosins	8.09
Essential oils, perfumes, soaps, and candles	4.37
Chemical products, inorganic	2.78
Fertilizers	.78
Chemical products, organic	2.24
Medicine	3.54
Colors, dyes, and tanning extracts	3.69
Skins and furs	.54
Rubber	.67
Paper, cartons, etc	1.35
Musical instruments	3.08
Precious stones and metals	.09
Clothing, n. e. s	2.86
Toys	2.58
Vegetable materials, n. e. s	3.24
Animal materials, n. e. s	.41
Miscellaneous	3.17

[1] Calculated from Movimento Commerciale del Regno d'Italia, 1926.

CANADA

The table below gives for the fiscal year 1929 imports of certain dutiable articles into Canada from the United States, together with the calculated equivalent ad valorem rates on such dutiable imports.

Imports of dutiable commodities into Canada for consumption from the United States, and equivalent ad valorem rates of duty, year ended March 31, 1929 [1]

Commodity	Value	Duty collected	Equivalent ad valorem
			Per cent
Total fruits, fresh	$7,796,603	$1,934,608	24.81
Fruits, prepared	2,164,962	616,035	28.45
Nuts	1,603,718	255,009	15.90
Vegetables, fresh	5,917,537	1,756,663	29.69
Grains	4,302,468	571,967	13.29
Milled products	1,218,584	127,221	10.44
Prepared foods and bakery products	967,336	225,781	23.34
Sugar and its products	1,555,894	565,812	36.37
Cocoa and chocolate	1,020,040	130,390	12.78
Oils, vegetable, not for food	843,746	95,671	11.34
Rubber and its products	2,926,702	883,878	30.20
Seeds	954,019	96,651	10.13
Tobacco	276,459	311,625	112.72
Animals, living	509,719	117,490	23.05
Bone, ivory, and shell products	134,364	22,345	16.63
Fishery products, n. o. p	1,253,268	193,578	15.45
Fur skins	1,186,513	207,225	17.47
Leather, unmanufactured	4,637,927	649,655	14.01
Leather, manufactured	2,597,957	734,969	28.29
Meats	4,282,706	890,743	20.80
Milk and its products	197,174	20,268	10.28
Oils, fats, greases	489,681	97,960	20.00
Cotton and its products	15,190,999	3,984,504	26.23
Flax, hemp, and jute products	1,520,028	361,955	23.81
Clothing, silk, n. o. p	2,357,433	884,039	37.50
Wool and its products	1,912,937	660,840	34.55
Artificial silk and products	2,382,566	828,672	34.78
Mixed textile products	6,093,716	1,901,442	31.20
Wood, manufactured	8,854,904	2,264,489	25.57
Total paper and manufactures of, except books and printed matter	10,157,444	3,058,966	30.12
Iron and its products	267,406,562	58,920,326	22.03
Nonferrous metals and their products	44,225,970	11,605,036	26.24
Nonmetallic minerals and their products	135,154,049	11,502,470	8.51
Miscellaneous commodities	24,280,067	6,735,425	27.74

[1] Canada, Department of Trade and Commerce. Trade of Canada, fiscal year ended Mar. 31, 1929.

APPENDIX A

SOME GERMAN AND UNITED STATES WAGES

The following table gives average wage rates in Germany and the United States for a number of industries.

Comparative wages for skilled worker in United States[1] *and Germany,*[2] *November, 1928*

Industry	Weekly wage	Calculated yearly wage (50 weeks)	Per cent German wage is of United States wage
Metal industry, Germany	[3] $11.70	$585.00	36.46
Foundry and machine shops, United States	32.09	1,604.50	
Chemicals, Germany	11.82	591.00	38.48
Chemicals, United States	30.72	1,536.00	
Wood industry, Germany	13.38	669.00	45.28
Lumber and millwork, United States	29.55	1,477.50	
Paper production, Germany	9.48	474.00	29.50
Paper and pulp, United States	32.14	1,607.00	
Printing, book, Germany	12.80	640.00	30.14
Printing, book and job, United States	42.47	2,123.50	

Industry	Weekly wage		Calculated yearly wage (50 weeks)		Per cent German wage is of United States wage
	Males	Females	Males	Females	
Textiles, Germany	$8.84	$6.42			[4] 32.54
Simple average cotton, hosiery, etc., silk and wool, United States	27.16	16.61	$1,358.00	$830.50	
Cotton, south, United States	16.40	12.34			[5] 38.60
Hosiery and knit goods, United States	36.20	16.60			
Silk, United States	28.83	17.51			[6] 35.57
Wool, United States	27.23	19.99			

[1] National Industrial Conference Board, the Service Letter on Industrial Relations, Jan. 25, 1929, p. 2. The wages are for male, skilled and semiskilled.

[2] Germany, national statistical office, Wirtschaft und Statistik, Dec. 2, 1928, p. 952. They are the wages specified in the labor agreements.

[3] German wages in the heavy iron and steel industry were increased about 4 per cent in December, 1928. (Ministry of Labour Gazette, January, 1929, p. 10.)

[4] Males.

[5] Females.

[6] Simple average.

APPENDIX B

RECIPROCAL TRADE

A careful investigation of foreign trade in any class of commodities; for example, leather shows that it is made up of the reciprocal exchange of hundreds of different qualities and classes. Because industry is dynamic and constantly changing and developing, it is out of the question that any particular group, national or otherwise, should be most proficient in the production of all the various classes and qualities of any commodity. Proximity of special grades of raw materials is only one of the factors that enables a particular country to specialize in certain qualities and grades.

Foreign trade is in large part simply the exchange and equalization of these special advantages. A table has been given which shows that many of the classes of articles subject to customs duties under the United States tariff are exported. There doubtless is a strong domestic demand for certain imported articles in each dutiable class, and it is doubtless true that under each class of dutiable articles there are many particular grades in which the domestic producer can not compete. However, it is usually true that in the same class, certain grades and qualities are manufactured in this country which can be readily sold in the foreign producing country.

If only the imports of commodities are shown it appears that the foreigner has a remarkable power of invading our markets, which is usually attributed to his low wage rates. If, on the other hand, exports of the same classes of goods are shown it appears that the same domestic goods are invading the foreign market. What really exists is a reciprocal trade based upon special qualities, grades, and advantages.

The following table shows such reciprocal trade between the United States, the United Kingdom, and Germany in 1927. It shows that certain goods were imported from the United Kingdom to the United States to the value of $56,718,642 and from Germany to the value of $43,381,832. This alone looks like formidable competition, but if exactly the same classes of goods are taken it appears that the exports to the United Kingdom amounted to $57,663,010 and to Germany $22,935,770.

Looking at the trade between the United Kingdom and the United States, and regarding particular classes of goods, it appears that over $1,000,000 worth of leather was imported from the United Kingdom, but nearly $6,000,000 worth of leather was exported to that country. A large part of the imports were sole leather, but each class was both imported and exported. While exports of goat and kid leather much exceeded imports, the unit value of exports was higher than that of imports.

About one and one-half million dollars' worth of shoes were imported as compared with about $600,000 worth exported. But the excess of imports was evidently not caused by the ability of the

Article	Unit	With United Kingdom						With Germany						
		Exports to			Imports from			Unit	Exports to			Imports from		
		Quantity	Value	Unit value	Unit value	Quantity	Value		Quantity	Value	Unit value	Unit value	Quantity	Value
Condensed and evaporated milk sweetened	Pounds	319,183	$38,196	$0.1197	$0.1360	12,600	$1,714							
Powdered milk	do	135,458	25,456	.1879	.1120	123,992	13,886							
Eggs and yolks frozen dried	do	9,365	1,991	.2126	.1900	250,800	47,652							
Meat extracts	do	118,193	241,753	2.0454	1.9288	41,494	80,034							
Gelatin								Pounds	618	$577	$0.9337	$0.2281	213,848	$48,772
Upper leather, goat and kid	Square feet	9,675,248	2,449,382	.2532	.2122	979,973	207,805	Square feet	429,247	149,246	.3477	.6162	3,630,302	2,237,040
Patent upper leather	do	10,280,190	3,320,290	.3230	.4233	14,102	5,969	do	1,566,295	548,798	.3504	.4739	2,036,870	965,293
Sole leather	Pounds	290,272	92,038	.3171	.2893	2,935,872	849,354	Pounds	15,103	9,300	.6158	.3156	29,256	9,232
Glove leather	Square feet	1,778	427	.2402	.3275	49,351	16,161	Square feet	19,708	1,971	.1000	.3744	38,361	14,361
Harness	Pounds	500	212	.4240	1.1480	24,759	28,423	Pounds	6,263	1,495	.2387	1.0000	2,248	3,597
Boots and shoes	Pairs	215,176	594,912	3.2295	5.7223	256,608	1,468,398	Pair	48,737	199,388	4.0911	2.2527	63,353	142,714
Slippers, leather	do	4,547	12,549	2.7598	1.4841	18,668	27,707	do	6,270	12,165	1.9401	.7718	81,188	62,663
Leather gloves	Dozen pairs	4,229	43,082	1.0187	1.6252	175,900	285,865	Dozen pairs	12	104	8.6666	.9942	3,047,999	3,030,393
Leather bags, etc	Number	420	3,227	7.6833			781,858	Number	207	1,196	5.7777			1,756,700
Feathers, dressed, and manufactures			11,655				9,438			36,045				77,479
Glue of animal origin	Pounds	331,020	60,784	.1836	.0729	3,432,447	250,360	Pound	84,898	13,482	.1588	.0860	1,209,835	104,079
Sponges	do	31,066	26,086	.8397	.5014	10,421	52,253	do	8,453	10,781	1.2754	2.3832	3,439	8,196
Wax manufactures	do	257,066	44,298	.1723	.2935	325,869	95,654	do	23,947	14,590	.6093	.2107	808,357	170,321
Rice	do	2,908,573	1,395,178	.0480	.0500	455,500	22,763	do	40,650,879	1,456,835	.0358	.0429	1,096,055	47,075
Wheat flour	Barrel	1,438,438	9,346,962	6.4980		[1] 91,140	5,352	Barrel	655,845	4,369,152	6.6618		[1] 3,322	422
Biscuits, crackers, etc	Pound	334,972	40,809	.1218	.3837	802,534	307,962	Pound	60,793	6,150	.1012	.4594	86,061	39,540
Beans, dried	Bushel	593	4,389	7.4013		[1] 221,433	7,833	Bushel	23	166	7.2170		[1] 4,810,065	206,109
Peas, dried	do	35,429	210,155	5.9317		[1] 465,857	40,491	do	1,379	7,639	5.5395		[1] 148,150	6,344
Canned peas	Pound	700,901	65,885	.0940	.0673	1,960	132	Pound	19,014	2,578	.1356	.1343	335	45
Canned tomatoes	do	509,280	30,843	.0606				do	1,665	151	.0907	.0481	31,900	1,535
Pickles	do	30,815	6,019	.1953	.2387	628,091	149,911	do						
Cocoa, prepared	do	1,869	259	.1386	.2448	2,639	646	do	2,280	725	.3179	.1510	121,708	18,377
Chocolate	do	54,451	12,732	.2338	.4541	55,535	25,218	do	3,200	800	.2500	.3323	797,993	265,188
Coffee	do	14,873	8,731	.5870	.2026	1,482,279	300,310	do	2,995,348	910,618	.3040	.2249	2,180,928	490,524
Molasses	Gallon	2,300,534	149,804	.0651	.0897	1,942,923	174,205							
Honey	Pounds	2,282,305	232,862	.1020	.7243	13,068	9,465	Pounds	8,483,332	687,532	.0810	.3794	593	225
Mineral waters	Gallons	6,215	5,422	.8724	1.5575	1,257	1,958	Gallons	112	90	.8035	.6834	229,481	156,837
Rubber tires	Number	209,056	2,708,435	12.9555	9.8432	1,563	15,385	Number	159,007	2,296,282	14.4413	2.8300	206	583
Rubber belting	Pounds	452,231	266,450	.5891	.6029	508,638	306,697	Pounds	56,597	30,238	.5343	.6919	41,743	28,884
Expressed oils and fats—linseed oil	Pounds	2,891	396	.1369	.0925	32,728	3,026	Pounds	1,558	216	.1386	.1731	9,606	1,663
Red clover	do	333,616	87,253	.2615	.1244	138,670	31,119	do	182,135	29,867	.1639	.2143	368,515	78,970
Grass seed	do	1,113,824	168,725	.1515	.1154	832,514	96,073	do	2,393,849	382,535	.1598	.2568	849,097	218,029
Starch	do	4,654,942	141,903	.0305	.0752	373,905	28,104	do	3,778	385	.1019	.0419	5,281,614	221,182
Hops	do	6,991,789	1,637,436	.2342	.5213	3,140	1,637	do	65,865	15,706	.2384	.5025	213,894	107,474
Cotton mill waste	do	29,367,371	3,645,825	.1241	.0836	3,406,918	284,728	do	29,342,054	2,067,618	.0705	.0615	3,197,555	196,496
Cotton yarns:														
Not bleached, combed	do	316,077	109,203	.3455	.9562	20,360	19,469	do	51,888	14,371	.2770	1.5948	469	748
Combed	do	776,150	748,554	.9644	1.2020	[2] 2,993,757	3,598,435	do	3,865	3,200	.8279	.6244	109,188	68,172
Cotton sewing thread, darning, etc	do	10,943	13,794	1.2605		601,522,159	187,796	do	5,470	5,337			[2] 177,654,372	117,449
Cotton cloth:														
Unbleached	Square yards	478,379	71,805	.1501	.1910	25,080,974	4,791,489	Square yards	2,274	494	.2172	.1907	95,687	18,247
Bleached	do	196,482	48,429	.2465	.3083	3,297,932	1,016,879	do	4,532	756	.1668	.3919	55,375	21,699
Colored, printed, etc	do	600,765	100,017	.1665	.3802	12,470,011	4,741,534	do	100	19	.1900	.2553	1,662,445	424,451
Cotton blankets	Pounds	32,467	25,372	.7815		[3] 1,367	2,160	Pounds	35	14	.4000		[3] 629,685	255,083
Cotton gloves	Dozen pairs	69,182	75,015	1.0845	6.9488	3,341	23,216	Dozen pairs	1,250	5,518	4.4144	2.9725	2,111,775	6,277,249
Hosiery	do	417,736	522,123	1.2499	5.2752	35,021	184,746	do	18,364	32,354	1.7618	2.9614	431,779	1,278,673
Underwear	Dozen	105,673	675,846	6.3956	11.1065	3,304	36,696	do	785	2,906	3.7019	2.5882	27,042	69,989
Jute bagging for covering cotton	Square yard	60,000	3,120	.5200			192,461	Square yard	5,000	625	.1250			
Bags of jute	Pound	3,303,299	280,942	.0850	.1301	293,443	38,181	Pound	392,409	39,083	.0996	.0418	246,479	10,297
Binding twine	do	1,981,005	211,323	.1067	.1121	110,183	12,347	do	2,557,000	255,700	.1000	.8630	157,363	13,628
Hat trimmings			1,960				13,153			1,347				2,043,264
Wool noils	Pound	23,682	7,684	.3245	.6632	7,189,486	4,767,765	Pound	91,620	29,045	.3170	.5148	464,912	239,358
Mohair cloth	do	458	2,549	5.5655	1.8857	116,995	220,625	do	429	1,161	2.7062	1.9050	1,474	2,808
Carpets and rugs of wool	Square yard	9,655	138,120	1.4304	7.3186	197,527	1,445,629	Square yard	566	3,328	5.8798	9.6047	6,882	66,100
Velvets, plushes, and chenilles	Pound	831	1,976	2.3778	7.3245	7,115	52,114	Pound	2,679	12,709	4.7439	7.1857	224,221	1,611,193
Shirts, dresses, collars, etc	Number	176	2,139	12.1534			517,855	Number	21	213	1.0143			38,339
Rayon yarn	Pound	4,163	17,081	4.1031	1.1803	53,773	63,467	Pound	123,385	134,654	1.0913	.9692	2,603,123	2,523,070
Linoleum	Square yard	213,252	138,483	.6494	1.1261	568,245	639,907	Square yard	20	35	1.7500	1.2182	7,710	9,392
Fur-felt hats	Number	17,983	94,764	5.2696	3.4098	89,326	304,584	Number	6,648	36,418	5.4780	1.8615	24,979	46,499
Sawed hardwoods, planks	Thousand feet	152	8,270	54.4078	161.1629	270	43,514	Thousand foot	40	4,256	106.4000	83.4063	64	5,338
Chairs	Number	4,021	12,771	3.1760	.4396	1,358	597	Number	24	220	9.1666	.1641	1,398,701	229,571
Sulphite wood pulp	Ton	219	26,899	12.2826	45.0448	1,182	53,243							
Rags for paper stock	Pound	4,259,962	458,808	.1077	.0260	67,486,692	1,754,847	Pound	4,290,611	225,433	.0525	.0185	55,458,741	1,024,774
Printing paper—newsprint paper	do	229,959	17,552	.0763	.0318	1,185,481	37,666	do	320,981	23,196	.0723	.0313	13,986,611	437,838
Wrapping paper	do	1,492,027	104,621	.0701	.0934	2,574	238	do	363,622	28,374	.0780	.0880	33,986	2,990
Surface-coated paper	do	129,574	46,910	.3620	.6806	312,355	212,605	do	15,006	4,823	.3214	.3694	1,329,520	491,177
Tissue paper	do	742,096	165,172	.2226	.6146	1,027,908	631,796	do	15,298	5,350	.3497	.1901	772,309	146,837
Sardines	do	2,819,107	241,166	.0855	.2104	67,055	14,109	do	320,681	27,267	.0850	.2038	33,879	6,904
Wall paper	Yard	2,707,615	96,003			[1] 1,068,593	253,634	Yard	5,029	1,071			[1] 659,537	89,978
Paper boxes	Pound	673,784	70,341	.1044	.7108	64,113	45,569	Pound	12,928	2,149	.1662	.6722	654,476	439,943
Other paper and manufactures			801,095				389,295			59,008				1,935,554
Anthracite coal	Ton	3,922	41,119	10.4842	7.7618	98,062	761,136							
Bituminous coal	do	211,784	1,196,088	5.6476	4.9774	27,149	135,132							
Coke	do	1,548	24,506	15.8307	5.7537	18,214	104,797	Ton	2,478	42,305	17.0722	5.8100	36,678	213,100
Gasoline in bulk	Barrel	966	5,029	5.2060	5.2546	143,253	752,741	Barrel	68	587	8.6323	13.0500	219	2,858
Lubricating oil	do	2,025,078	15,496,660	7.6524	26.8972	399	10,732	do	1,160,410	7,854,835	6.7690	11.4301	865	9,887
Sand and gravel	Ton	342	14,155	41.3889	2.8030	2,076	5,819							
Glass bottles, vials, and jars			239,766				4,358			1,216				92,538
China table, toilet, and kitchen ware	Pound	27,057	8,453			[4] 156,842	1,027,231	Pound	2,413	1,355			[4] 3,155,809	3,807,092
Cement, hydraulic, etc	Barrel	36,068	214,535	5.9481	1.8873	55,002	103,808	Barrel	2,134	12,218	5.7254	1.3691	7,623	10,437
Chalk manufactures	Pound	228,738	16,557	.0724	.0318	2,329,552	74,111	Pound	581	1,803	3.1497	.0433	87,772	3,802
Mica and manufactures	do	710,776	52,201	.0734	.6174	230,609	142,370	do	201,523	12,235	.0607	.9113	19,928	18,160
Salt	do	208,104	1,228	.0059	.0089	7,208,548	64,241	do	110,380	1,015	.0092	.0050	1,692,501	8,465
Iron ore	Ton	11,696	58,480	5.0000	24.0000	947	22,728							
Steel bars	Pound	557,742	84,816	.1521	.1103	4,334,193	477,988	Pound	6,971	2,417	.3467	.0156	33,838,306	529,431
Bar iron								do	31,714	2,131	.0672	.0141	1,636,501	23,143
Wire rods	Pound	1,176,844	30,361	.0258	.0464	87,455	4,057							
Tin plate, terne plate, and taggers tin	do	9,389,055	494,679	.0527	.0791	2,336,856	184,732							
Barbed wire	do	131,227	3,763	.0287	.0267	721,571	19,261							
Nails	do	549,039	26,485	.0482	.0232	670,424	15,540							
Scissors and shears	Dozen	1,508	13,943	.7705	.6060	68,796	41,688							
Tools			1,284,080				60,219			57,244				432,098
Aluminum plates, sheets, and bars	Pound	5,273,269	1,265,266	.2399	.3052	28,157	8,594	do	73,294	15,450	.2108	.3218	8,585	2,763
Tin bars, blocks, and pigs	do	670,283	275,911	.4116	.6166	31,276,507	19,285,005	do	759,670	185,841	.2459	.6390	2,926,370	1,869,956
Jewelry			120,529				34,595			12,915				349,833
Electric lamps, including metal filaments	Number	16,524	17,117	1.0359	.2973	2,102	625	Number	1,796	407	.2266	.0713	847,495	60,397
Other electric lamps	do	54,579	15,726	.2881	2.3169	609	1,411	do	2,307	1,024	.4439	1.5370	1,879	2,888
Hosiery knitting machines	do	4,355	1,565,967	359.5791	1,150.5000	2	2,301	do	33	17,974	544.6667	3,936.1370	803	3,160,718
Quinine sulphate								Ounce	41,000	15,900	.3878	.4118	185,952	76,575
Copper sulphate (blue vitriol)	Pound	55,963	2,798	.0500	.0484	311,116	15,048	Pound	483,824	24,190	.0500	.0436	1,343,526	58,619
Chlorinated lime or bleaching powder	do	45,216	4,093	.0905	.0475	1,173,318	55,668	do	13,536	608	.0449	.0129	1,452,340	18,700
Glycerin	do	5,020	1,520	.3028	.2150	484,271	104,122	do	12,596	1,856	.1473	.2035	4,136,357	841,800
Negative films	Linear foot	4,277,118	1,086,665	.2541	.1019	372,787	37,993	Linear foot	796,115	104,723	.1315	.0403	287,206	11,568
Positive films	do	9,529,380	353,371	.0371	.0322	702,812	22,686	do	9,391,491	246,135	.0262	.0271	809,190	21,929
Spectacles, eyeglasses, and parts			218,476				1,956			12,594				73,277
Fishing rods, reels, hooks, etc			17,155				167,011			4,617				13,662
Other athletic goods			171,820				197,941			22,722				39,797
Pyroxylin manufactures			520,810				16,624			4,010				739,533
Cream separators									112	3,318	29.6250	22.1127	497	10,990
Pig iron	Ton	6,910	139,175	20.1411	19.2016	21,129	406,003	Ton	275	8,133	29.5745	20.6465	9,211	190,176

[1] Pounds
[2] Yards.
[3] Number.
[4] Dozen.

English to make cheaper shoes than the Americans make because the average value per pair of imports was $5.72 while the average value of exports was $3.23.

Combed cotton yarns bleached to a value of $3,598,000 were imported compared with exports valued at $748,000. Yet it was evidently not the cheapness of the English yarns that led to their importation, since they cost $1.20 per pound compared with $0.96 per pound for the exported yarns. These yarns were imported because of their peculiar suitability for certain purposes, and price was a secondary consideration. The same relative values are found in imports and exports of many other classes of articles. The table discloses that the same principles are true with respect to the trade between the United States and Germany.

The following tables gives the unit import and export values in 1927 of 150 classes of articles which were imported and exported. The unit value is obtained by dividing the total value imported or exported by the total quantities imported or exported. In addition to the import and export unit values, the unit value of the domestic production is shown in some cases.

In 64 out of the 146 items the unit value of imports exceeds the unit value of exports, showing in such cases that the average article exported presumably cost less to produce than the average article imported. Of course the quality of the imported article is presumably superior. The table at least shows that the imports do not come in because they are cheaper than the average domestic article in the same class.

The table shows the unit value of domestic production for 44 items. But in 24 of these items the unit value of the imports was higher than the unit value of the domestic production.

Unit values of production, exports, and imports

Commodity	Paragraph[1]	Unit	Year	Production	Exports	Imports
Schedule 1:						
Oleic acid or red oil	1	Pounds	1928		0.088	0.127
Aluminum sulphate	6	do	1928 (1926)	0.0122	.012	.010
Ammonium sulphate	7	do	1928		.020	.021
Blackings, paste	13	do	1928		.205	.163
Bleaching powder	14	do	1928		.169	.025
Calcium carbide	16	do	1928 (1925)	.0257	.046	.036
Dyes and colors	28	do	1928		.202	1.10
Vulcanized fiber	32	do	1928		.283	.175
Logwood extract	39	do	1928 (1925)	.141	.098	.177
Quercitron	39	do	1928 (1925)	.060	.106	.086
Osage orange	39	do	1928 (1925)	.073	.106	.086
Tanning extract	39	do	1928		.051	.061
Flavoring extract	40	do	1928		.897	.803
Formaldehyde	41	do	1928		.084	.046
Gelatin	42	do	1928		.652	.766
Ink, printers'	44	do	1928		.129	.511
Ink, other	44	do	1928		.382	.384
Linseed oil	54	do	1928		.116	.081
All other expressed and extracted oil	54	do	1928		.087	.090
Coconut oil	55	do	1928		.065	.079
Cottonseed oil	55	do	1928	.090	.114	.134
Soybean oil	55	do	1928		.106	.062
Hydrogenated oils and fats	57	do	1928		.134	.200
Peppermint oil	59	do	1928	3.289	3.420	4.129
Plasters	66	do	1928		1.173	1.234
Red lead	74	do	1928 (1927)	.089	.088	.061
White lead	74	do	1928 (1927)	.117	.074	.096
Zinc oxide and leaded zinc oxide	79	do	1928		.063	.066
Lithopone	79	do	1928 (1927)	.048	.051	.025
Potassium	80	do	1926		.061	.177
Sodium bicarbonate	83	do	1927	.015	.018	.082

[1] Tariff Act of 1922.

Unit values of production, exports, and imports—Continued

Commodity	Paragraph	Unit	Year	Production	Exports	Imports
Schedule 1—Continued.						
Sodium carbonate, calcined	83	Pounds	1927	0.010	0.024	0.044
Borax, refined	83	do	1928 (1927)	.035	.015	.023
Sal soda	83	do	1927	.025	.013	.029
Sodium chromate	83	do	1928		.065	.164
Sodium hydroxide	83	do	1928		.029	.135
Dextrine	86	do	1928		.043	.050
Schedule 2:						
Plate glass	222	Square feet	1928		.299	.211
Incandescent electric-light lamps	229	Number	1928 (1925)	.189	.143	.033
Schedule 3:						
Tungsten and ferrotungsten	302	Pounds	1928	.770	7.41	.401
Plates and skelp	307	do	1928		.018	.014
Wire rods	315	do	1928		.020	.026
Iron or steel wire, plain	316	do	1928		.043	.073
Iron or steel wire, galvanized	316	do	1928		.027	.154
Wire strand and rope	316	do	1928		.131	.078
Galvanized wire fencing	317	do	1928		.055	.036
Ball and roller bearings	321	do	1928		.556	.827
Chains	329	do	1928		.165	.094
Bolts, nuts, washers	330	do	1928		.081	.053
Cut nails and spikes	331	do	1928		.039	.025
Horseshoe nails	331	do	1928		.109	.153
Wire nails and spikes	331	do	1928		.029	.023
Wood screws of iron and steel	338	Gross	1928		.113	.154
Metallic pens	351	do	1928		.524	.389
Files and rasps	362	Dozen	1928		1.174	1.814
Pistols and revolvers	366	Number	1928		1.735	2.68
Cotton-yarn machinery	372	Pounds	1928		.198	.197
Silk-yarn machinery	372	do	1928		.339	.290
Shovels and spades	373	Number	1928		.997	.427
Aluminum, crude, metal and alloys	374	Pounds	1928		.186	.207
Aluminum, plates and sheets	374	do	1928		.248	.415
Aluminum, mouldings	374	do	1928		.397	.333
Copper pipes and tubing	381	do	1928 (1925)	.258	.256	.368
Copper plates and sheets	381	do	1928 (1925)	.216	.215	.420
Brass and bronze tubes	381	do	1928 (1925)	.247	.253	.262
Brass and bronze rods, bars, plates	381	do	1928		.205	.241
Mercury	386	do	1926	1,225	1.190	.916
Types	389	do	1928		.577	.460
Nickel and alloys	390	do	1928		.368	.252
Lead pigs, bars, etc	393	do	1928		.046	.087
Schedule 7:						
Cheese	710	do	1928		.307	.304
Honey	716	do	1928		.090	.256
Salmon	717	do	1928		.161	.113
Salmon, mild-cured	718	do	1928		.262	.116
Fish packed in oil	720	do	1928 (1927)	.094	.081	.176
Barley, hulled or unhulled	722	Barrels	1928	.552	.825	1.025
Buckwheat	723	do	1928	.875	.875	1.810
Buckwheat, flour	723	Pounds	1925	.040	.051	.023
Macaroni, vermicelli, noodles	725	do	1928		.090	.108
Oats	726	Barrels	1928	.409	.501	.655
Oatmeal, rolled oats	726	Pounds	1928		.051	.100
Rice	727	do	1928 (1925)	.054	.038	.043
Rice flour	727	do	1928		.038	.037
Rye	728	Barrels	1928	.864	1.199	1.095
Rye flour	728	do	1928 (1925)	5.73	5.96	4.82
Biscuits and crackers	733	Pounds	1928		.186	.304
Apples, dried	734	do	1928 (1925)	.105	.118	.047
Apples, prepared or preserved	734	do	1928		.054	.191
Apricots	735	do	1928		.145	.083
Cider	738	Gallon	1928		.621	.308
Raisins	742	Pounds	1928		.056	.138
Lemons	743	do	1928	.043	.077	.031
Oranges	743	do	1928	.042	.071	.065
Grapefruit	743	do	1928	.035	.059	.031
Peaches	745	do	1928		.033	.021
Peaches, dried	745	do	1928 (1925)	.096	.098	.091
Plums, prunes dried	747	do	1928	.050	.061	.067
All jellies, jams, marmalades	748	do	1928		.086	.134
Peanuts shelled and unshelled	757	do	1928		.096	.050
Grass seed, alfalfa	761	do	1923		.188	.170
Red clover seed	761	do	1928		.145	.193
Other clover seeds	761	do	1928		.169	.055
Timothy seeds	761	do	1928		.053	.090
Dried beans	763	Barrels	1928		3.43	2.70
Canned beans	763	Pounds	1928		.085	.090
Peas dried	767	Barrels	1928		4.038	2.31
Canned tomatoes	770	Pounds	1928		.064	.056
Canned asparagus	773	do	1928		.153	.086
Coffee substitutes	774	do	1928		.639	.401

Unit values of production, exports, and imports—Continued

Commodity	Paragraph	Unit	Year	Production	Exports	Imports
Schedule 7—Continued.						
Cocoa butter	775	Pounds	1928 (1927)	0.376	0.320	0.344
Hay	777	Long tons	1928		20.91	9.04
Hops	778	Pounds	1928		.226	.326
Schedule 9:						
Cotton window hollands	907	Square yards	1928		.186	.286
Oilcloths	907	do	1928		.218	.106
Filled cotton cloths	907	do	1928		.573	.163
Waterproof cloths	907	do	1928		.486	.368
Cotton hosiery	916	Dozen pairs	1928 (1927)	1.53	1.736	3.465
Schedule 10:						
Jute yarns, cordage, and twine	1003	Pounds	1928		.156	.150
Cordage	1005	do	1928		.138	.132
Jute bags and sacks	1018	do	1928		.104	.109
Linoleum	1020	Square yards	1928 (1927)	.842	.682	1.055
Schedule 11:						
Yarn of wool or hair	1107	Pounds	1928		1.95	1.883
Wollen cloths	1109	do	1928		1.687	1.85
Worsted cloth	1109	do	1928		1.893	2.75
Mohair cloth	1109	do	1928		2.193	2.154
Schedule 12:						
Thrown silk	1203	do	1928		5.447	6.896
Sewing silk, twist, floss	1204	do	1928		7.935	6.412
Silk pile fabrics	1206	do	1928 (1927)	5.067	3.469	6.903
Silk hosiery	1208	Dozen pairs	1928 (1927)	9.449	10.733	13.906
Schedule 13:						
Box boards	1302	Pounds	1928		.027	.022
Sheathing and building paper	1302	do	1928 (1927)	.032	.037	.053
Blotting paper	1309	do	1928 (1927)	.103	.114	.285
Playing cards	1312	Packs	1928		.115	.346
Boxes of paper or paper board	1313	Pounds	1928		.067	.253
Schedule 14:						
Paint brushes	1407	Number	1928		.237	.034
Pearl buttons	1410	Gross	1928 (1927)	.851	.298	.476
Upholstery leather	1431	Square feet	1928		.221	.317
Bags, strap, case, and football leather	1431	do	1928		.318	.645
Fancy leather	1431	do	1928		.258	.313
Gas mantles	1435	Dozen	1928		.840	.274
Band instruments	1443	Number	1928		42.112	3.888
Dry plates	1453	Dozen	1928		.580	.558
Motion pictures—						
Not exposed	1453	Linear feet	1928		.023	.012
Negatives	1453	do	1928		.158	.135
Positives	1453	do	1928		.025	.041